973118

WEST CHICAGO
ENVIRONMENTAL RESPONSE TRUST
245 W Roosevelt Rd, Bldg 15, Ste 106, West Chicago, IL 60185-3739 (630) 293-6330 Fax (630) 231-3990

7 March 2018

Mr. David Seely
Remedial Project Manager
U.S. EPA, Region 5
Superfund Division (SR-6J)
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

SUBJECT: 2017 Annual Monitoring Report, Revision 00
Reaches 5D, 5E, 8, and the Mack Road Staging Area
The Kress Creek / West Branch DuPage River Site, West Chicago, IL

Dear Mr. Seely,

Weston Solutions, Inc., not individually but solely in its capacity as Trustee of the West Chicago Environmental Response Trust (WCERT), is pleased submit, for your review, the 2017 Annual Monitoring Report (Report) for the Kress Creek / West Branch DuPage River Site (Site). The Report presents the results of 2017 monitoring and maintenance activities that were performed in Reaches 5D, 5E, 8, and the Mack Road Staging Area of the Site to characterize the status of restored habitats following the completion of remedial activities. All monitoring and maintenance activities were performed in accordance with the approved *Conceptual Mitigation and Restoration Design Plan* (BBL, 2005).

Please do not hesitate to contact me if you have any questions or need any additional information. Your prompt review will be appreciated.

Sincerely,

Deepak L. Bhojwani
Program Manager, WCERT

Email cc: Jamie Lock (DuPage County); Kurt Stimpson (WCERT)

2017 Annual Monitoring Report

Reaches 5D, 5E, 8, and the Mack Road Staging Area of the Kress Creek / West Branch DuPage River Site

Prepared For:

West Chicago Environmental Response Trust
Bldg. 15, Suite 106
245 W. Roosevelt Road
West Chicago, IL 60185

Prepared By:

Applied Ecological Services, Inc.
120 W Main Street
West Dundee, IL 60118
AES Project Number: 17-0111

SmithGroupJJR
44 East Mifflin Street, Suite 500
Madison, WI 53703
SmithGroupJJR Project Number:
20752.000

Version 00

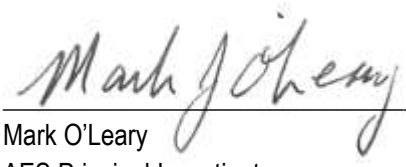
March 2018

2017 Annual Monitoring Report

Reaches 5D, 5E, 7, 8, and the Mack Road Staging Area of the Kress Creek / West Branch DuPage River Site
DuPage County, Illinois

Certification

To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Mark O'Leary
AES Principal Investigator

Deepak Bhojwani
WCERT Program Manager

March 2018

Table of Contents

Figures

Tables

Exhibits

Appendices

Executive Summary

This report presents the results of monitoring and maintenance activities that were performed during 2017 for the Kress Creek / West Branch DuPage River Site in DuPage County, Illinois. The monitoring activities were performed by Applied Ecological Services, Inc. and SmithGroupJJR on behalf of the West Chicago Environmental Response Trust (WCERT) to characterize the status of restored habitats following the completion of remedial activities and were performed in accordance with the approved *Conceptual Mitigation and Restoration Design Plan* (BBL, 2005).

Cleanup at the site began during summer 2005 and progressed through 2013. Due to Federal funding issues, the project went through an orderly shutdown on June 1, 2014, and no maintenance or monitoring activities were performed during the 2014 season. Maintenance or monitoring activities resumed in 2015, and key decisions were made by WCERT and agency staff that summer regarding these activities. Project activities continued throughout 2016 and 2017, and this report documents these activities for the 2017 season and the status of each reach.

Agency Meetings, Correspondence and Key Decisions

WCERT met and corresponded several times with the Local Communities in 2017. The following summarizes key decisions made during those meetings and communications:

- **Bridge Construction Repairs:** Due to ongoing bridge construction at the McDowell Grove Forest Preserve, the Local Communities stated WCERT will not be responsible for monitoring and replacing trees, shrubs, and other vegetation damaged by the bridge construction activities. The site will be evaluated at the completion of bridge construction to assess damaged vegetation and to recommend areas to be removed from WCERT's responsibility.

- **Streambank Repair:** WCERT prepared design and bid documents for the restoration of two stretches of Ferry Creek. Design modifications by the Local Communities were incorporated into the plans and per direction in the field during construction. A pre-bid meeting was held at McDowell Grove Forest Preserve with AES, WCERT, and proposing contractors on April 10th. The contract was awarded to ENCAP on June 1, 2017. A project kick-off call was held on June 19th with AES, WCERT, and ENCAP. In mid-July, a storm in northern Illinois created some concern for flooding at the project site. AES met ENCAP, WCERT, and Local Communities on site to assess water levels and see if stone placement work was possible. At the time of arrival, water levels were deemed low enough to continue with stone work, but by the end of the day water levels had risen to a point where work was halted. By mid-August WCERT reviewed the completed work by ENCAP and identified two punch list items:
    - Reseed and blanket the disturbed access areas with prairie seed, or a turf seed mix, depending on location.
    - Repair ruts in trail by spreading and compacting new limestone screenings.

Management Activities

Management of herbaceous species within specific areas of each reach under consideration is summarized below.

<u>Reach 5E</u>

- This site was brushed during the spring at the west end of Transect 6 and between Transect 4 and the river. Spot herbiciding of weeds (clover, sweet clover, black medic, plantain, fleabane, Queen Anne's lace, and

ragweed) was performed in August, and mowing occurred three times during the growing season. Site was broadcast herbicided in October in preparation for discing and reseeding in spring 2018.

Reach 8A

- Pod R8-3. The site was herbicided in early July for honeysuckle. In early August, invasive woody species were cut and treated again, thistle and burdock were spot herbicided, ragweed and pokeweed were mowed, and bindweed was pulled. Box elder, buckthorn, and honeysuckle were cut and treated in December.

- Area 4. The site was spot herbicided for garlic mustard, reed canary grass, and creeping Charlie in late May, July, and August. Buckthorn was removed in July, and the site was mowed in July and September.

- Areas 5. Site was spot herbicided three times during the spring and summer for reed canary grass, moneywort, and giant ragweed. Honeysuckle and box elder were removed in August.

- Area 6. This site was spot herbicided in May, July, and August for reed canary grass, purple loosestrife, *Phragmites*, and giant ragweed. Giant ragweed, mugwort, and black locust were mowed or cut in early August. Box elder and mulberry in the north area were cut and removed in December.

Reach 8B

- Area 11. This area is a narrow strip along the south and east banks of the DuPage River near the McDowell Grove parking area off Raymond Drive. The area was spot herbicided in May and overseeded. Reed canary grass, ragweed, and creeping Charlie were spot herbicided in July. No management was completed after July due to bridge construction. On April 24, the Local Communities requested additional trunk protection for trees along the river edge, noting that high beaver activity in Reach 8B had caused the loss of several trees. Additional trunk protection was put in place in late May 2017.

- Area 12. This is the largest (8.98 acres) area within Reach 8B. The area was spot herbicided for clover, sweet clover, thistle, Canada goldenrod, and other weeds in May, early July, and early August. The northern upland was over-seeded with an upland prairie mix on June 28. Ragweed, Queen Anne's lace, sweet clover, and cottonwood were mowed in early August. The access routes used for stream bank repair access were blanket herbicided on October 13 and were reseeded on December 14.

The Mack Road Staging Area

- No management occurred in this area.

Reach 5D Upland Savanna

- This area was spot herbicided late May, July, and in early August for clover, sweet clover, bluegrass, Dame's rocket and woody resprouts and mowed in July and September.

Monitoring Results and Management Recommendations

The following summarizes conclusions for each reach based on 2017 monitoring results and site inspections, and proposes management activities for specific areas for 2018.

Herbaceous Vegetation
Vegetation monitoring results and recommended management activities for each reach are detailed below and summarized in Table EX. 1. Table EX. 2 compares the 2017 monitoring results with the 2016 and 2015 monitoring results.

Reach 5E
Performance: Reach 5E was broadcast herbicided twice in 2016 and burned and reseeded that fall. The site continued to be dominated by non-native vegetation in 2017 with the three most dominant species being weedy, two of which are non-native. Due to the site's poor performance, the upland savanna area of the site was broadcast herbicided again during fall of 2017.

Recommendations:
- Disc and broadcast herbicide the upland savanna in early spring 2018.
- Re-seed site in spring 2018 with modified savanna mix.
- Check and spot herbicide red canary grass and *Phragmites* along river (in restored floodplain area) in the spring.

Reach 8A
Performance: Reach 8A met only three of six performance standards. Note, signoff will be considered separately for Reach 8A and Reach 8B, per the 2015 Annual Monitoring Report.

Recommendations: Pod R8-3
- Spot herbicide giant ragweed, garlic mustard, and creeping Charlie in spring 2018.

Recommendations: Area 4
- Spot herbicide teasel and other weeds in spring 2018.

Recommendations: Area 5
- Spot herbicide reed canary grass and other weeds in spring 2018.
- Over-seed bare areas in spring 2018 after spot herbiciding.

Recommendations: Area 6
- Spot-herbicide creeping Charlie, *Phragmites,* and other weeds in north area in spring 2018.
- Spot-herbicide reed canary grass and other weeds in south area in spring 2018.
- Over-seed south area in spring 2018 after herbiciding.

Reach 8B
Performance: Reach 8B met or exceeded four out of six performance standards. The ground cover was 98.9%, the mean C was 3.87, the three most dominant species were native, and the Native Mean C, RIV, and FQI increased in 2017. However, invasive weeds composed 5.2% of the herbaceous ground cover, and patches of bare ground exceeded 0.5 square meters.

Recommendations: Area 11 – T1 (North of drive)
- Burn during the spring of 2018.
- Mow area with weed whips prior to burning.
- Seed with a few native wetland grasses in spring after the burn to fill in bare ground.

- Spot herbicide Canada goldenrod and giant ragweed in spring 2018.
- Add approximately 100 wetland plugs on the bench along the shoreline near shelter.

Recommendations: Area 11 – T2 (South of drive)

- Most of the area was disturbed during bridge construction. WCERT is not responsible for repairing or managing this area.
- Spot herbicide areas of Canada goldenrod and giant ragweed that were not damaged during bridge construction in early spring 2018.

Recommendations: Area 12 – T3 & T4

- Burn area north of path in spring 2018.
- Spot herbicide Canada goldenrod, blue grass, and reed canary grass at north end, in swales, and other areas where these weeds persist after the burn.
- Mow north end in late spring.
- The area near Raymond Drive was disturbed during bridge construction and will be restored by others.

Recommendations: Area 12 – T5

- These areas are dominated by native species with few invasive species.
- Spot herbicide invasive species as needed during 2018.

Recommendations: Area 12 – T6

- Spot herbicide giant ragweed and Canada goldenrod in spring 2018.

Recommendations: Area 12 –T7

- Spot herbicide Canada goldenrod and giant ragweed in early spring 2018.
- Spot herbicide and mow access routes as needed.

Recommendations: Area 12 – T8

- Manage with spot herbiciding and mowing as needed.

Mack Road – Staging Area

Performance: Mack Road staging area achieved its performance standard (>90% native vegetation cover), but will not receive signoff until the Reach 5D-Upland Savanna also meets the same performance standard.

Reach 5D Upland Savanna

Performance: Reach 5D upland savanna met one standard - total vegetation cover >90%, this year. Sign off for the upland savanna is not recommended.

Recommendations: This area will be mowed, spot herbicided, and plugged with native grasses and forbs in 2018.

Monitoring Methods

Herbaceous Species

Herbaceous species were quantitatively monitored along transects during September 15 and 16, 2017. Time meander searches were completed in each site on June 6 and 7 and September 15 and 16. Herbaceous species were monitored per the Plan except that quadrats were located along transects as is generally accepted by regulatory agencies in the region. This modified protocol was approved per a June 11, 2015, email to the USEPA and Local Communities' representatives. The location and number of quadrats per transect is included as Exhibit B.

Tree and Shrub Survival

Tree and shrub monitoring for survival was performed in Reach 8B and Mack Road / Reach 5D Upland Savanna on September 6-7, 2017. Survival was determined by visual assessment of the plant material, using the following criteria established in 2015 by the project team and agency staff:

> *Replace any plants that are damaged, dead, or, in the opinion of the Owner's Representative, with concurrence from the Local Communities, are unhealthy, or have lost more than 25% of their natural shape due to dead branches, excessive pruning or improper maintenance.*

As modified by the 2015 Annual Monitoring Report, percent survival is based on the number of acceptable plants observed during 2017 as compared to the recorded number of acceptable plants observed during 2015. The criterion for acceptance is 90% survival of the 2015 acceptable plant material. Replacements for plants that did not meet acceptance criteria in 2015 on Forest Preserve property shall be made at the completion of the maintenance and monitoring period for each reach as a punch list item. All plants not meeting acceptance criteria in 2015 were allowed to remain in place, but are no longer subject to maintenance and monitoring requirements.

Only plants that were coded as "Acceptable Condition" were considered to have "survived" for the percent survival calculation.

Bower Elementary School in Reach 8A was not monitored during the September 2017 visit. All dead plant material identified during 2015 at the school site was replaced in May 2016, with a one-year warranty period. A warranty condition assessment was conducted on May 8, 2017. As all replacement plantings were noted to be acceptable at that time, all obligations have been met for final sign-off of the Bower Elementary site.

Similarly, tree and shrub punch list replacements for Reach 7 were installed on two islands in the West Branch DuPage River in May 2016, with a one-year warranty period. These plantings were also assessed during the May 8, 2017 warranty site visit. Following this visit, six trees and four shrubs required warranty replacements, and the replacement materials were installed by the contractor in June 2017. At this time, the contractor also removed all staking from the plants. At the request of the Forest Preserve, the trunks of all trees were loosely wrapped with chicken wire for additional beaver protection, which will be removed by Forest Preserve staff at a future date. Survival of the warranty plant replacements was verified on July 19, 2017. Therefore, all obligations have been met for final sign-off of Reach 7.

Monitoring Results

Herbaceous Vegetation

Table EX.1 below summarizes the results of 2017 herbaceous species monitoring. Monitoring results indicate that no areas have achieved all performance standards; therefore, none are recommended for signoff.

Table EX.1 2017 vegetation monitoring results by reach and management recommendations for 2018.

Reach	Standard	2017 Results			2018 Management Recommendations	Recommend Signoff?
5E	90% cover	82.7%			Disc and herbicide in spring; Re-seed with modified savanna mix; Check and spot herbicide RCG and *Phragmites* along river.	Not recommended. Percent cover under 90%, invasive weeds exceed 5%, Native C is below 3.5 and patches of bare ground exceeds 0.5 sq. meters, 2 of the 3 most dominant plants are non-native.
	<5% weeds	48.2%				
	Native C > 3.5	3.19				
	FQI	33.47				
	Native RIV	45.0				
	C, FQI, and RIVI increase	N/A				
	No Bare ground ≥ 0.5 square meter	No				
	3 most dominant species native?	Species	RIV	Native?		
		TRIHYB	15.3	No		
		DAUCAR	7.7	No		
		ERIANN	6.8	Yes		
8A	90% cover	90.0%			**Pod R8-3**: Spot herbicide giant ragweed, garlic mustard, and creeping Charlie in spring. **Area 4-6:** Spot herbicide weeds in spring. Overseed bare areas in Areas 5 and 6.	Not recommended. Invasive weeds exceed 5%, Native C is below 3.5 and patches of bare ground exceeds 0.5 sq. meters
	<5% weeds	8.7%				
	Native C > 3.5	3.29				
	FQI	35.84				
	Native RIV	83.7				
	C, FQI, and RIV increase	Yes				
	No Bare ground ≥ 0.5 square meter	No				
	3 most dominant species native?	Species	RIV	Native?		
		RUDTRI	12	Yes		
		EUPSER	9.3	Yes		
		SYMLAN	6.5	Yes		

Reach	Standard	2017 Results			2018 Management Recommendations	Recommend Signoff?
8B	90% cover	98.9%			**Area 11**: Burn north of bridge in the spring; Mow area with weed whips prior to burning; Seed this area with wetland grasses after burn; Spot herbicide weeds in spring; Add plugs along shoreline near shelter. **Area 12:** Burn area north of path in Spring; Spot herbicide Canada goldenrod, cool season grasses, and other weeds throughout; Mow north end late spring; Manage access routes with spot herbiciding and mowing as needed.	Not recommended. Invasive weeds exceed 5% and patches of bare ground exceeds 0.5 square meters
	<5% weeds	5.2%				
	Native C > 3.5	3.87				
	FQI	55.24				
	Native RIV	78.1				
	C, FQI, and RIV increase	Yes				
	No Bare ground ≥ 0.5 square meter	No				
	3 most dominant species native?	Species	RIV	Native?		
		SOLCAN	9.5	Yes		
		SORNUT	8.3	Yes		
		SYMLAN	5.4	Yes		
Mack Road Staging Area	90% native cover	89.6%			Spot herbicide non-native species.	Recommended when Reach 5D meets all standards.
5D Upland Savanna	90% cover	95.2%			Spot herbicide and mow weeds as needed; Install plugs with appropriate native grasses and forbs.	Not recommended. Invasive weeds exceed 5%; Native C below 3.5, patches of bare ground exceed 0.5 sq. meters, and 1 of the 3 most dominant plants are non native.
	<5% weeds	55.9%				
	Native C > 3.5	3.19				
	FQI	23.21				
	Native RIV	47.6				
	C, FQI, and RIVI increase	Yes				
	No Bare ground ≥ 0.5 square meter	Yes				
	3 most dominant species native?	Species	RIV	Native?		
		ERIVIL	24.6	No		
		ELYCAN	14.9	Yes		
		RUDSUB	7.3	Yes		

Table EX.2 2015 - 2017 vegetation monitoring results by reach.

Reach	Standard	2015 Results			2016 Results			2017 Results			Change From 2015
5E	90% cover	114.0%			N/A			82.7%			-31.3%
	<5% weeds	56.3%			N/A			48.2%			-8.1%
	Native C > 3.5	3.06			N/A			3.19			0.1
	Native FQI	25.22			N/A			33.47			8.3
	Native RIV	56.5			N/A			45			-11.5
	No Bare ground ≥ 0.5 square meter	Yes			N/A			No			N/A
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	1/3 Species Native
		POAPRA	17	No	N/A	N/A	N/A	TRIHYB	15	No	
		SYMLAN	11	Yes	N/A	N/A	N/A	DAUCAR	7.7	No	
		ANDGER	6.6	Yes	N/A	N/A	N/A	ERIANN	6.8	Yes	
8A	90% cover	111.6%			61.5%			90.0%			-21.6%
	<5% weeds	38.8%			15.1%			8.7%			-30.1%
	Native C > 3.5	2.93			2.93			3.29			0.36
	Native FQI	25.05			25.4			35.84			10.79
	Native RIV	54.4			77.6			83.7			29.3
	No Bare ground ≥ 0.5 square meter	No			No			No			No change
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	3/3 Species Native
		PHAARU	12	No	SYMLAN	16	Yes	RUDTRI	12	Yes	
		SYMLAN	12	Yes	GLEHED	12	No	EUPSER	9.3	Yes	

Reach	Standard	2015 Results			2016 Results			2017 Results			Change From 2015
		SOLALT	11	Yes	RUDSUB	6.5	Yes	SYMLAN	6.5	Yes	
8B	90% Cover	105.0%			94.3%			98.9%			-6.1%
	<5% weeds	36.0%			21.0%			5.2%			-30.8%
	Native C > 3.5	3.72			3.12			3.87			0.16
	Native FQI	44.76			33.21			55.24			19.31
	Native RIV	70.8			74.9			78.1			7.3
	No Bare ground ≥ 0.5 square meter	No			No			No			No change
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	No change
		SOLALT	9.2	Yes	SOLCAN	8	Yes	SOLCAN	9.5	Yes	
		PHAARU	5.2	No	ELYCAN	4.6	Yes	SORNUT	8.3	Yes	
		ELYVIR	4.5	Yes	ELYVIR	4.5	Yes	SYMLAN	5.4	Yes	
Mack Road Staging Area	90% native cover	85.2%			93.1%			89.6%			4.40%
5D Upland Savanna	90% cover	N/A			79.0%			95.2%			N/A
	<5% weeds	N/A			73.8%			55.9%			N/A
	Native C > 3.5	N/A			2.85			3.19			N/A
	Native FQI	N/A			17.77			23.21			N/A
	Native RIV	N/A			24.6			47.6			N/A

Reach	Standard	2015 Results			2016 Results			2017 Results			Change From 2015
	No Bare ground ≥ 0.5 square meter	N/A			No			Yes			N/A
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	N/A
		N/A	N/A	N/A	ECHPUR	19.6	Yes	ERIVIL	25	No	
		N/A	N/A	N/A	AVESAT	15.8	No	ELYCAN	15	Yes	
		N/A	N/A	N/A	SETVIR	26.7	No	RUDSUB	7.3	Yes	

*Only Native C, Native FQI, and Native RIV need to improve from Year 1 to Year 3 per the performance standard found in the Plan.

Tree and Shrub Survival

The Mack Road / Reach 5D Upland Savanna site fell just shy of meeting the performance standard for survival of woody plants, with 89.45% total survival of the plants remaining after the 2015 monitoring season. Only one tree has been lost at the Mack Road site, and 84% of shrubs have survived. Reach 8B also does not meet the performance standard, with 78.92% of all plants surviving. Again, trees had a higher survival rate than shrubs, at 82% and 77% respectively. Table EX.3 below summarizes the results of Tree and Shrub Survival Monitoring.

Construction for a bridge expansion project at the McDowell Grove Forest Preserve was also observed during the 2017 monitoring visit. Several trees and shrubs were observed to have been damaged or removed by the construction activities. Other trees were located within the construction limits, and although they did not appear damaged at the time of observation, these may exhibit future stress from compaction of their root zone. Per discussion with the Local Communities, these impacted plants will be removed from WCERT's management responsibility, and the site will be evaluated at the completion of bridge construction to assess if any additional plants were damaged.

Table EX.3 Percent survival of trees and shrubs in all reaches for the 2017 monitoring season.

Site	% Survival Trees	% Survival Shrubs	Total % Survival of Woody Plants
Mack Road / Reach 5D Upland Savanna	99%	84%	89.45%
Reach 8B	82%	77%	78.92%

Discussion

Herbaceous Vegetation

Reach 5E: Reach 5E met none of the six performance standards. Portions of the site were brushed during the spring and the upland savanna was spot herbicided once in August. Based on poor performance of the site, the decision was made to re-seed the upland savanna next spring (2018). As a result, the site was broadcast herbicided in October and will be disced and reseeded in spring 2018 with a modified savanna seed mix. Other recommendations include checking and spot herbiciding reed canary grass and *Phragmites* along the river (in restored floodplain area) in the spring.

Reach 8A: Reach 8A met or exceeded three of the six performance standards for 2017. The following summarizes the condition and recommended treatments for Reach 8A by area.

- Pod R8-3. The site was herbicided in early July for honeysuckle. In early August, invasive woody species were cut and re-treated, thistle and burdock were spot herbicided, ragweed and pokeweed were mowed, and bindweed was pulled. Recommendations for 2018 include spot herbiciding giant ragweed, garlic mustard, and creeping Charlie in the spring.
- Area 4. Area 4 was spot herbicided for garlic mustard, reed canary grass, and creeping Charlie in late May, July, and August. Buckthorn was removed in July, and the site was mowed in September. Recommendations for 2018 include spot herbiciding teasel and other weeds and installing plant plugs in the spring.
- Area 5. Area 5 was spot herbicided three times during the spring and summer for reed canary grass, moneywort, and giant ragweed. Honeysuckle and box elder were removed in August. Recommendations for 2018 include: continued spot treating of creeping Charlie, *Phragmites*, and other weeds in the north area; spot treating of reed canary grass and other weeds in the south area in the spring; overseeding the south area; and installing plant plugs in both areas after herbiciding.
- Area 6. This area was spot herbicided in May, July, and August for reed canary grass, purple loosestrife, *Phragmites*, and giant ragweed. Giant ragweed and black locust were removed in early August. Recommendations for spring 2018 include spot-herbicide treatment of *Phragmites*, creeping Charlie, reed canary grass and other weeds; overseeding bare spots in the southern area; and installing plant plugs in both areas.

Reach 8B: This reach met or exceeded four out of six performance standards. This is an improvement from last year (2016) when two of six performance standards were met. Weeds present within the reach include sweet clover, common ragweed, giant ragweed, Canada thistle, crown vetch, clover, and *Phragmites*. Woody weedy species include honeysuckle and buckthorn, black locust, silver maple, and cottonwood saplings and re-sprouts.

The following summarizes the condition and recommended treatments for Reach 8B by area:

- Area 11. No management was performed after July due to construction of a new bridge over the DuPage River. The area was spot herbicided and overseeded in May. Reed canary grass, ragweed, and creeping Charlie were spot herbicided again in July. Burning is recommended for spring 2018 north of the drive, followed by spot herbiciding Canada goldenrod and giant ragweed, and installing native grasses and wetland plugs on the shelf along the shoreline. Most of the area south of the drive (T2) and a smaller are

north of the drive were disturbed by bridge construction. WCERT is not responsible for repairing or restoring these areas per a November 22 email from the County.

- Area 12. This area was spot herbicided for clover, sweet clover, thistle, Canada goldenrod, and other weeds in May, early July, and early August. The northern portion of the area was over-seeded in late June. Ragweed, Queen Anne's lace, sweet clover, and cottonwood were mowed in early August. On October 13, the access routes used for the stream bank repair project on Ferry Creek were blanket herbicided in preparation for seeding that occurred on December 14. Recommendations for 2018 include burning in the spring, spot herbiciding Canada goldenrod and giant ragweed in the area near the river (e.g. T6, T7 & T8), and spot herbiciding Canada goldenrod and non-native cool-season grass at the north end of T3, T4, and in the swales. The north end of T3 and T4 will also be mowed later in the spring.

Mack Road Staging Area: The Mack Road Staging Area achieved the performance standard of 90% native vegetative cover in 2016. No maintenance was completed in 2017.

Reach 5D Upland Savanna: This area was spot herbicided in late May, July, and August, and mowed in July and September. Only one standard - total vegetation cover >90%, was met this year. This area will be mowed, spot herbicided, and plugged with native grasses and forbs in 2018. Sign off for both the Mack Road Staging area and Reach 5D Upland Savanna is not recommended.

Tree and Shrub Survival

After having met the criteria for 90% survival of woody plant material in 2016, the loss of four plants in 2017 pushes the Mack Road / Reach 5D Upland Savanna site just under the threshold at 89.45% survival. Trees continue to perform significantly better than shrubs, as only one tree has been lost since 2015. Given that many of the shrubs are still small in stature compared to the prairie grasses surrounding them and that the existing staking materials were observed to be in poor condition and falling apart during the 2015 monitoring, it is still highly possible that the eight missing plants were broken off or trampled by the maintenance contractor during work to remove and reset staking materials. These shrubs may regrow from the root if they were only damaged, and become acceptable again as was observed in Reach 8 this year with a *Crataegus crus-gali* previously noted as missing that was located.

The Reach 8 site did not meet the established performance criteria of 90% survival in 2016 or 2017. In 2017, the largest losses were due to high beaver activity noted in April 2017 by the Local Communities. Although WCERT responded by upgrading beaver protection on the surviving trees, the damage was already done. Of the 16 trees lost in 2017, 14 were due to beaver damage. Especially hard hit were *Betula nigra* and *Salix nigra*. For shrubs, 12 plants were noted as dead, while another plant was noted as missing. However, this number includes two shrubs that were impacted by the bank stabilization project on Ferry Creek. The overall percentage of acceptable material also decreased by a percentage point due to the bridge construction project with the removal of seven healthy trees from the calculation.

Restored Banks

All banks inspected on the West Branch of the DuPage River in Reach 8B are stable. The two areas of bank erosion on Ferry Creek identified in 2016 were repaired and stabilized during summer 2017 and remain in stable condition.

Conclusions and Recommendations

Herbaceous Vegetation

Management of Reach 8A, 8B, and 5D has resulted in improved conditions at each reach. Non-native cover has been reduced from 15% to 9% in 8A, and 21% to 5% in 8B. Reach 8A met or exceeded three of six performance standards for 2017- ground cover was 90%, the three most dominant species were native, and the Native Mean C, FQI, and RIV increased in 2017. Reach 8B met or exceeded four out of six performance standards. Total vegetation cover was 98.9%, the native Mean C was 3.87, and the three most dominant species were native. Native Mean C, FQI , and RIV all increased between 2015 and 2017. No management was performed at the Mack Road Staging Area in 2017. The Reach 5D upland savanna met one standard - total vegetation cover >90%, this year. Due to Reach 5E's poor performance, the upland savanna area of the site was broadcast herbicided again during fall of 2017. The site will be re-seeded in spring of 2018 with a modified savanna mix.

Proposed management activities and the reaches where they will be implemented are listed in Table EX. 4 below. Table EX.4 summarizes proposed 2018 management activities by task and reach.

Table EX.4 Summary of proposed 2018 management activities by task.

Task	Reach(s)	Unit	Unit(s)	Schedule 2018
Burn	8B-Area 12	Acres	8.98	Q1
	8B-Area 11	Acres	0.53	Q1
Spot Herbicide (2-3 visits throughout the growing season)	8B-Area 12	Acres	8.98	Q2-Q3
	8B-Area 11	Acres	0.53	Q2-Q3
	8A-Area 6	Acres	0.23	Q2-Q3
	8A-Area 5	Acres	0.28	Q2-Q3
	8A-Area 4	Acres	0.35	Q2-Q3
	8A-Pod R8-3	Acres	0.14	Q2-Q3
	5D Upland Sav	Acres	0.23	Q2-Q3
	5E	Acres	4.57	Q2-Q3
Discing	5E	Acres	4.57	Q2
Supplemental Seeding	8B-Area 11	Acres	0.53	Q2-Q3
	8A-Area 5	Acres	0.28	Q2-Q3
	8A-Area 6	Acres	0.23	Q2-Q3
	5E	Acres	4.57	Q2-Q3
Install Plant Plugs	8B-Area 11	Acres	0.53	Q2
	8A-Area 6	Acres	0.23	Q2
	8A-Area 5	Acres	0.28	Q2
	8A-Area 4	Acres	0.35	Q2
	5D Upland Sav	Acres	0.23	Q2
Mow 1-2x	8B-Area 12	Acres	8.98	Q2-Q3
	8B-Area 11	Acres	0.53	Q2-Q3

Tree and Shrub Survival
The following recommendations are made for woody plant survival:

- Continue to monitor the Mack Road / Reach 5D Upland Savanna site, which is currently just below meeting performance standards. Herbaceous vegetation should be eligible for sign off at the end of the 2018 growing season. If woody standards are not met during 2018, WCERT will discuss appropriate remedial measures with the Local Communities.
- Although Reach 8 is presently not meeting woody standards, we do not recommend replacing woody material until the herbaceous vegetation meets acceptance criteria. As Reach 8B herbaceous vegetation will not be eligible for signoff until fall 2018, we will continue to assess the woody survival to determine appropriate replacements in addition to the 2015 punch list.
- Recommend final sign off for Bower Elementary School site.
- Reset all loose staking materials around trees and shrubs during spring 2018.

Restored Banks
The following recommendations are made for bank stability:

- No additional monitoring should be required of stable reaches. Sign off of West Branch of the DuPage River in Reach 8B is recommended.
- Repaired areas of Ferry Creek should be monitored for stability following one bankfull discharge event as per the monitoring plan. Restored vegetation within the Ferry Creek construction zone should be monitored until all performance standards for Reach 8B achieve vegetation performance standards.
- If the restored banks remain stable during 2018, sign off will be requested.

Projection for Future Maintenance and Monitoring Activities
Maintenance and monitoring activities will continue until all areas meet established performance criteria and receive signoff. Based on the 2015 recommendation to blanket-herbicide and reseed, Reach 5E, Reach 5D Upland Savanna, and Reach 8A Area 4 will require at least three additional years of monitoring following seeding to verify that the herbaceous vegetation established is successful. Reach 5D was reseeded June 4, 2016, and thus may be eligible for signoff by the end of the 2018 growing season. Because access to Reach 5D is through the Mack Road Staging Area, this entire area will also be maintained and monitored through at least the 2018 growing season. Reach 8A Area 4 was reseeded November 30, 2016, following summer herbicide applications. Therefore, the required three full growing seasons for monitoring of this area is anticipated to end during fall 2019. Also, because smaller sub-areas are not considered separately for signoff, all other areas of Reach 8A will also require monitoring through 2019. Reach 8B will be eligible for signoff of herbaceous vegetation during fall of 2018, as agreed upon by WCERT correspondence dated February 11, 2016, and will be monitored and managed until that time. The upland savanna area of Reach 5E will be seeded again next spring (2018); thus, it won't be eligible for sign off until fall of 2020.

Warranty condition assessments for tree and shrub replacements were completed for Reach 7 and Bower Elementary School in May 2017, with required warranty replacements accepted in July 2017. WCERT's obligation for these sites was fulfilled at that time. Monitoring of trees and shrubs in Reach 8B and the Mack Road Staging Area will continue until these areas meet performance criteria, including the herbaceous vegetation as discussed above.

It is recommended that the entire stretch of Ferry Creek be monitored for one year following the remediation of the identified eroded banks, assuming that at least one bankfull discharge storm event occurs. Repairs on Ferry Creek were completed during Summer 2017, as a result the creek will be ready for signoff by Summer 2018. Bank monitoring on the West Branch DuPage River is complete.

1.0 Introduction

This report presents the results of monitoring and maintenance activities that were performed during 2017 for the Kress Creek / West Branch DuPage River Site in DuPage County, Illinois. Monitoring activities were performed by Applied Ecological Services, Inc. (AES) and SmithGroupJJR on behalf of the West Chicago Environmental Response Trust (WCERT) to characterize the status of restored habitats following the completion of remedial activities, and were performed in accordance with the approved *Conceptual Mitigation and Restoration Design Plan* (BBL, 2005) with approved changes or clarifications as documented below. The 2017 monitoring results were compared to performance standards to determine if restored habitats were performing as designed, or if adaptive management maintenance activities should be implemented to achieve performance standards. Signoff is requested for tree and shrub plantings at Bower Elementary School in Reach 8A which have achieved performance standards and have been monitored for the required time period.

1.1 Overall Project History

From 1932 to 1973, the Rare Earths Facility in West Chicago processed radioactive thorium and other elements from ores and sands. Wastes from the facility contaminated Kress Creek, the West Branch of the DuPage River, and other local sites, which collectively were designated by the USEPA as the Kress Creek Superfund Site. The site has been divided into several different sections or "Reaches" as described below:

- Reach 1: Kress Creek from the storm sewer outfall south of Roosevelt Road to May Street.
- Reach 2: Kress Creek from May Street to Joy Road.
- Reach 3: Kress Creek from Joy Road to Route 59.
- Reach 4: Kress Creek from Route 59 to the confluence with the West Branch DuPage River (WBDR).
- Reach 5A: WBDR from West Chicago Wastewater Treatment Plant to Gary's Mill Road.
- Reach 5B: WBDR from Gary's Mill Road to confluence with Kress Creek.
- Reach 5C: WBDR from the confluence with Kress Creek to Mack Road.
- Reach 5D: WBDR from Mack Road to River Oaks subdivision.
- Reach 5E: WBDR from River Oaks subdivision to Williams Road.
- Reach 6: WBDR from Williams Road to Butterfield Road.
- Reach 7: WBDR from Butterfield Road to Warrenville Dam.
- Reach 8A: WBDR from Warrenville Dam to approximately 2,200 feet upstream of McDowell Dam.
- Reach 8B: WBDR from Reach 8A to McDowell Dam.

Cleanup at the site began in Reach 5B, and progressed through 2013 when the last of the work was completed at Reach 8B, the Bower Elementary School site in Reach 8A, and the Route 59 Bridge over Kress Creek. Per the *Conceptual Mitigation and Restoration Design Plan*, post-construction monitoring of streambanks and restored public land is required for a minimum of three years (BBL, 2005). This monitoring is ongoing for certain reaches as described in Section 2.0 below. Monitoring of residential and commercial sites was required for one year following construction, and has been completed for all Reaches.

Due to Federal funding issues, the project went through an orderly shutdown on June 1, 2014, and no maintenance or monitoring activities were conducted until August 2015 as documented by the 2015 Annual Monitoring Report. Maintenance and monitoring continued in 2016, as documented in the 2016 Annual Monitoring Report. This report documents the project activities for the 2017 season.

2.0 Agency Meetings, Correspondence and Key Decisions

Representatives from AES and SmithGroupJJR communicated with WCERT and the Local Communities during 2017 to facilitate a mutual understanding of the status of monitoring and management activities. Important meetings, correspondence, and key decisions are listed below:

- April 26 2017: AES forwarded to Tallgrass an email chain between the Local Communities, SmithGroupJJR, and WCERT regarding beaver damage to planted trees along the DuPage River in McDowell Grove.
- May 8, 2017: An email discussion between AES, SmithGroupJJR, the Local Communities, and Tallgrass regarding an agreement to 48-hour advance notification to the Local Communities prior to herbiciding.:
- May 8, 2017 site meetings:
- May 23, 2017: The Local Communities approved the substitution of five *Salix nigra* (1.5" caliper) with 10 *Platanus occidentalis* (3/4" to 1" caliper) for the required warranty replacements on the Reach 7 islands.
- May 30, 2017: Email from Tallgrass to AES, SmithGroupJJR, and WCERT confirming that planted trees along the DuPage River in McDowell Grove were wrapped with chicken wire to prevent further beaver damage.
- July 31, 2017: Communications between AES, SmithGroupJJR, the Local Communities, and WCERT on notification process for herbiciding and access issues on WCERT properties.
- August 15, 2017: Email from AES to WCERT, SmithGroupJJR, the Local Communities, and Tallgrass documenting agreed upon communication contacts with the County.
- September 15, 2017: Conference call with WCERT, AES, and Tallgrass regarding watering at Ferry Creek streambank restoration. All agreed that Tallgrass would water planted material weekly, as needed, but not seeded areas.
- October 23, 2017: Due to ongoing bridge construction at the McDowell Grove Forest Preserve, the Local Communities stated that any trees and shrubs within the construction limits will be removed from WCERT's responsibility for monitoring and replacement. As observed during the September 2017 monitoring visit, preliminary locations of the plants impacted are noted on the diagrams in Exhibit C. The site will be evaluated at the completion of bridge construction to assess if any additional plants were damaged, and modifications will be made to WCERT's management area as appropriate.

Representatives from AES also communicated with WCERT and the Local Communities during 2017 to facilitate the Ferry Creek streambank stabilization work. Important meetings, correspondence, and key decisions are listed below:

- January 20, 2017: The Local Communities alerted WCERT that they had revisions they would like made to the Ferry Creek Streambank Stabilization plans, including changing the way the riffle ties into the bank and how the stone work will be completed so there is no excavation, among other comments.
- February 1, 2017: AES met with WCERT and the Local Communities to review plan comments made by the Local Communities. WCERT requested that AES include a "Cover Page" with a Table of Quantities for bidding purposes. WCERT also requested that AES include "Written Specifications" in the plan for Contractor installation purposes.
- February 24, 2017: AES had call with WCERT to review latest draft of plans. Comments included changing "the Owner" to WCERT in the specifications, and to remove filter fabric from stream structure details.
- March 23, 2017: AES was directed by WCERT to handle the bidding process including distributing the documents to a list of selected contractors, conducting the pre-bid meeting, reviewing the bids, and

assistance with selecting a contractor to do the work. This scope was included in the 2017 proposal from AES to WCERT.

- March 29, 2017: After reviewing the plans, WCERT directed A.ES to:
  - Remove the summary of quantities on first page
  - On second page, and in regard to the specified staging area, insert "…staging area or an alternate staging area approved by the District."
  - Regarding access road, add note that the contractors must propose how, where, and what materials are necessary for access.
- April 10, 2017: Pre-bid meeting was held at McDowell Grove Forest Preserve with AES, WCERT, and proposing contractors
- April 21, 2017: Bids were received by AES from Baish Excavating, Inc. and ENCAP, Inc.
- June 1, 2017: A contract was awarded to ENCAP for the stream restoration work after AES and WCERT reviewed proposals.
- June 19, 2017: A project kick-off call was held with AES, WCERT, and ENCAP. Project goals and schedule were discussed. Stone source and photos were provided by ENCAP.
- June 22, 2017: ENCAP provided a detailed construction schedule to WCERT and AES.
- June 29, 2017: The Local Communities reviewed stone on site and flags marking the location of the proposed access paths. Boulder shape and size range was approved. The cobble was noted to be smaller than that specified, so they requested future loads to in the 5"-10" range. Locations of the access paths were also approved.
- July 3, 2017: ENCAP provided a Trail Crossing & Safety plan to WCERT and AES.
- July 12, 2017: A storm in northern Illinois created some concern for flooding at the project site by WCERT and AES. AES met ENCAP, WCERT, and Local Communities on site to assess water levels and see if stone placement work was possible. At the time of arrival, water levels were deemed low enough to continue with stone work, but by the end of the day water levels had risen to a point where work was halted. Direction given to ENCAP during site visit:
  - The Local Communities directed ENCAP will get a load of smaller cobble (1"-2") to top-dress the already placed cobble to lock it into place.
  - The Local Communities directed the placement of stone on the east bank of the creek to prevent erosion in that location.
  - ENCAP determined that an 8" dia. hawthorn that would need to be taken down to facilitate construction. This was approved by the Local Communities, but it was suggested that ENCAP lay access mats closer to the creek to protect roots of existing trees to be saved.
  - The Local Communities and AES directed ENCAP to place boulders in clusters instead of spacing them every 3-5' for the upstream 100' of bank repair.
  - It was decided by the Local Communities that, if there were extra boulders once most stone placement was complete, ENCAP would construct a vane to deflect water placed near the midpoint of the repair area where it transitions from continuous boulder placement at the toe to spaced boulder placement.
- July 13, 2017: AES reviewed USGS gage data to determine that water levels had risen from the previous day so called off any toe work at Ferry Creek.
- August 17, 2017: WCERT reviewed completed work by ENCAP and identified two punch list items:
  - Reseed and blanket the disturbed access areas with prairie seed or a turf seed mix, depending on location
  - Repair ruts in trail by spreading and compacting new limestone screenings

2.1 Status of Restoration and Monitoring by Reach

Table 2.1 Summary of the status of each Reach for monitoring activities and agency signoff.

Reach or Area	Monitoring Period Start Date	Certified Completion of Monitoring	Comments
Reach 1	10.2.2007	12.15.2010	
Reach 2	10.2.2007	12.15.2010	
Reach 3A	10.2.2007	12.15.2010	
Reach 3B	11.27.2007	9.11.2012	
Reach 4	11.27.2007	9.11.2012	
Reach 5A	08.11.2006	9.11.2012	
Reach 5B	06.25.2008	9.11.2012	
Reach 5C	11.17.2008	9.11.2012	
Reach 5D	11.24.2008	9.11.2012	Excludes Mack Road / Reach 5D Upland Savanna
Reach 5E	11.24.2008	Ongoing	
Reach 6	08.24.2009	11.12.2013	
Reach 7	9.20.2012	April 2016	
Reach 8A	9.20.2012	Ongoing	
Reach 8A – Bower Elementary	10.28.2013	Ongoing	Requesting sign off this year (2017).
Reach 8B	09.25.2015	Ongoing	
Mack Road Staging Area	6.8.2012	Ongoing	Includes Reach 5D Upland Savanna
Route 59 Bridge Area	12.7.2012	April 2016	

Based on the meetings held with Agency staff, below is a summary of the areas identified with ongoing monitoring activities for 2017. These areas are also documented for individual locations within the Reach per base maps in Exhibit A.

<u>Reach 5E</u>
Herbaceous: Full Performance Standards required
Tree / Shrub Survival: Monitoring completed, 2010
Restored Banks: Monitoring completed, 2011

<u>Reach 8A</u>
Herbaceous: Full Performance Standards required in areas shown on Exhibit A
Tree / Shrub Survival: N/A
Restored Banks: Monitoring completed, 2016

Reach 8A – Bower Elementary
Herbaceous: N/A
Tree / Shrub Survival: Warranty assessment for replacement plant material
Restored Banks: N/A

Reach 8B
Herbaceous: Full Performance Standards required in areas shown on Exhibit A
Tree / Shrub Survival: Monitoring required in areas shown on Exhibit A
Restored Banks: Monitoring of West Branch of the DuPage River completed, 2017; Monitoring of repaired areas on Ferry Creek shown on Figure 5.2 required.

Mack Road Staging Area and Reach 5D Upland Savanna
Herbaceous: 90% Native Cover for Mack Road Staging Area; Full Performance Standards required for Reach 5D Upland Savanna
Tree / Shrub Survival: Monitoring required for Mack Road Staging Area.
Restored Banks: N/A

3.0 Maintenance, Management and Monitoring Activities

3.1 Maintenance and Management Events

Following a year of no maintenance during 2014 due to lack of federal funding, maintenance and management activities resumed during late summer / fall 2015. Tallgrass Restoration, LLC, with oversight by SmithGroupJJR staff, completed maintenance tasks during August and September of 2015. Tallgrass Restoration, LLC, with oversight by AES and SmithGroupJJR staff, completed maintenance tasks from March through December of 2016 and from April through December of 2017. Primary maintenance tasks during 2017 consisted of broadcast and spot herbiciding invasive weeds, overseeding with native mixes and prescribed mowing. Table 3.1 summarizes management activities that occurred during 2017. See Appendix A for copies of field reports.

3.2 Monitoring Events

Monitoring herbaceous and woody plant material and the stability of banks and in-stream structures occurred over several visits as described below:

- Trees and Shrubs: September 6-7, 2017, monitored per methods described below.
- Quantitative Herbaceous Monitoring: Monitored September 14 and 15, 2017, per methods described below.
- Floristic Inventories: Inventoried June 6 and 7, 2017, and during quantitative herbaceous monitoring September 14 and 15, 2017, per methods described below.
- Stream Banks and In-stream Structures: Construction was observed July 5, 12, 18, 19, 24, 26, 29, and August 22. Monitoring post-construction happened December 6, 2017 per methods described below.

3.3 Management Activities

Management of areas within each reach is summarized below and more detailed lists of these activities are found in Table 3.1 and Appendix A.

<u>Reach 5E</u>

- This site was brushed during the spring at the west end of Transect 6 and between Transect 4 and the river. Spot herbiciding of weeds (clover, sweet clover, black medic, plantain, fleabane, Queen Anne's lace, and ragweed) was performed in August, and mowing occurred three times during the growing season. Site was broadcast herbicided in October in preparation for discing and reseeding in spring 2018.

<u>Reach 8A</u>

- Pod R8-3. Site was herbicided in early July for honeysuckle. In early August, invasive woody species were cut and treated again, thistle and burdock were spot herbicided, ragweed and pokeweed were mowed, and bindweed was pulled.

- Area 4. Site was spot herbicided for garlic mustard, reed canary grass, and creeping Charlie in late May, July and August. Buckthorn was removed in July, and site was mowed in July and September.

- Areas 5. Site was spot herbicided three times during the spring and summer for reed canary grass, moneywort, and giant ragweed. Honeysuckle and box elder were removed in August.

- Area 6. This site was spot herbicided in May, July, and August for reed canary grass, purple loosestrife, *Phragmites*, and giant ragweed. Giant ragweed, mugwort, and black locust were mowed or cut in early August.

Reach 8B

- Area 11: This area is a narrow strip along the south and east banks of the DuPage River near the McDowell Grove parking area of Raymond Drive. The area was spot herbicided in May and overseeded. Reed canary grass, ragweed, and creeping Charlie were spot herbicided in July. No management was completed after July due to bridge construction. On April 24, the Local Communities requested additional trunk protection for trees along the river edge, noting that high beaver activity in Reach 8B had caused the loss of several trees. Additional trunk protection was put in place in late May 2017.

- Area 12. This is the largest (8.98 acres) area within Reach 8B. The area was spot herbicided for clover, sweet clover, thistle, Canada goldenrod, and other weeds in May, early July, and early August. The northern upland was over-seeded with an upland prairie mix on June 28. Ragweed, Queen Anne's lace, sweet clover, and cottonwood were mowed in early August. The access routes used for stream bank repair access were blanket herbicided on October 13. These access routes were reseeded on December 14.

The Mack Road Staging Area

- No management occurred in this area.

Reach 5D Upland Savanna

- This area was spot herbicided late May, July, and in early August for clover, sweet clover, bluegrass, Dame's rocket and woody resprouts and mowed in July and September.

Table 3.1 Summary of site inspections and specific maintenance and management tasks completed during 2017.

Date	Reach	Activity	Notes
05.20.2017	5D, 8B	Site inspection	See 04.25.2017 memo from Bill Stoll "WCERT Native Vegetation Management Inspection Report"
05.10.2017-05.12.2017	5D, 8A, & 8B	Herbicide and spot mowing	See "2017 WCERT Activities", Appendix A
05.14.2017	8A Bower Elementary , 7	Tree & Shrub Inspection	See 05.15.17 memo from Jessie Fink "Field Observation Report"
05.23.2017	Mack Rd, 5D, 5E, 8A & 8B	Site inspection	See 06.01.17 memo from Bill Stoll "WCERT Native Vegetation Management Inspection Report"
06.21.2017	5E	Mowing	See "2017 WCERT Activities", Appendix A
05.05.2017-08.21.2017	8B	Stream Bank Repair	
06.28.2017	7	Tree & Shrub Installation	See 07.20.2017 memo from Jessie Fink "Field Observation Report"
06.28.2017-07.14.2017	7	Periodic Watering	See "2017 WCERT Activities", Appendix A
06.28.2017	8B	Overseeding	See "2017 WCERT Activities", Appendix A
07.05.2017-07.06.2017	5D, 8A, & 8B	Herbicide	See "2017 WCERT Activities", Appendix A
07.18.2017-07.19.2017	5D, 5E, & 8A	Mowing	See "2017 WCERT Activities", Appendix A
07.19.2017	7	Tree & Shrub Inspection	See 07.20.2017 memo from Jessie Fink "Field Observation Report"
07.20.2017	Mack Rd, 5D, 5E, 8A & 8B	Site inspection	See 07.21.17 memo from Bill Stoll "WCERT Native Vegetation Management Inspection Report"
8.01 - 08.02.2017; 08.04.2017	5D, 5E, 8A & 8B	Herbicide, Mowing & Cut/Treat Woodies	See "2017 WCERT Activities", Appendix A
09.06.2017	Mack Rd, 5D, & 8B	Tree and Shrub Field Monitoring	See 09.11.2017 memo from Jessie Fink "Field Observation Report"
09.07.2017	5E	Mowing	See "2017 WCERT Activities", Appendix A
09.18.2017	5D, 8A	Mowing	See "2017 WCERT Activities", Appendix A
09.22.2017	5D, 5E, 8A & 8B	Site inspection	See 10.06.17 memo from Bill Stoll "WCERT Native Vegetation Management Inspection Report"
09.29.2017	8B	Water Plugs	See "2017 WCERT Activities", Appendix A
10.10.2017	5E	Blanket Herbicide	See "2017 WCERT Activities", Appendix A

10.13.2017	8B	Blanket Herbicide T5 & T8	See "2017 WCERT Activities", Appendix A
11.17.2017	5E & 8B	Site inspection	See 12.02.2017 email from William W. Stoll "WCERT Management recommendation updates" , Appendix A

4.0 Monitoring Methods

4.1 Herbaceous Species

Herbaceous species were monitored along transects during September 15 and 16, 2017. Herbaceous species were monitored per the Plan except that quadrats were located along transects as is generally accepted by regulatory agencies in the region. This modified protocol was approved per a June 11, 2015 email to the USEPA and Local Communities' representatives. The location and number of quadrats per transect is included as Exhibit B.

4.2 Tree and Shrub Survival

Chapter seven of the monitoring plan states that shrub survival shall be monitored in three randomly located 25-square meter plots per acre, and tree survival shall be monitored in one 100-square meter plot per acre. Revised woody plant restoration requirements were established during 2015 to assist with the establishment of herbaceous vegetation and to prevent an overabundance of plantings with remaining trees that did not meet acceptable form. For plantings on property owned by the Forest Preserve District of DuPage County (FPDDC), the agreed upon action items and assessment criteria are as follows:

- All trees noted as dead during the monitoring period will be allowed to remain in place. Removal is not necessary.
- All trees noted as re-growing from root or tree leader dead during the monitoring period will be allowed to remain in place. No pruning, removal, or future maintenance and monitoring is required for these plants.
- The trees found to be in acceptable condition in the 2015 assessment are the new baseline for maintenance and monitoring for each reach. Therefore, 90% survival of these plants is the criteria for acceptance, and full maintenance and monitoring is required.
- Tree and shrub replacements for plants not meeting acceptance criteria during 2015 shall be replaced at the completion of the maintenance and monitoring period for each reach as a punch list item. FPDDC will provide planting locations for installation of the replacement plants. The geographic origin of all plant materials shall be within a 100-mile radius of the project area. No maintenance and monitoring will be required for the replacements.
- Upon final signoff of each reach, all tree and shrub protection shall be removed.

Tree and shrub survival monitoring was completed on September 6-7, 2017, and included the following locations:

- Reach 8B: Areas 11 and 12 as noted on the Local Communities release memorandum dated September 27, 2013.
- Mack Road Staging Area: Entire staging area including Reach 5D Upland Savanna habitat.

Bower Elementary School in Reach 8A was not monitored during the September 2017 visit. All dead plant material identified during 2015 at the school site was replaced in May 2016, with a one-year warranty period provided by the

contractor. A warranty condition assessment was conducted on May 8, 2017. As all replacement plantings were noted to be acceptable at that time, all obligations have been met for final sign-off of the Bower Elementary site.

Similarly, tree and shrub punch list replacements for Reach 7 were installed on two islands in the West Branch DuPage River in May 2016, with a one-year warranty period. These plantings were also assessed during the May 8, 2017 warranty site visit. Following this visit, six trees and four shrubs required warranty replacements, and the replacement materials were installed by the contractor in June 2017. At this time, the contractor also removed all staking from the plants. At the request of the Forest Preserve, the trunks of all trees were loosely wrapped with chicken wire for additional beaver protection, which will be removed by Forest Preserve staff at a future date. Survival of the warranty plant replacements was verified on July 19, 2017. Therefore, all obligations have been met for Reach 7.

During the monitoring, survival was determined by visual assessment of the plant material, using the following criteria established during 2015 by the project team and agency staff:

> *Replace any plants that are damaged, dead, or, in the opinion of the Owner's Representative, with concurrence from the Local Communities, are unhealthy, or have lost more than 25% of their natural shape due to dead branches, excessive pruning or improper maintenance.*

Diagrams were created to document the condition of each individual plant installed per the record drawings, as shown in Exhibit C. The recorded conditions were characterized as follows:

- Acceptable Condition: Plant condition and form meets the criteria outlined above. Only plants that were coded as "Acceptable Condition" were considered to have "survived" for the percent survival calculation.
- Plant Dead: Entire plant was observed to be dead.
- Original Plant Dead, Re-growing from Root: The original tree as planted was observed to have completely died from the ground up, but the plant is re-sprouting from the root ball. Typically, the regrowth is characterized as a more shrub-like form with multiple suckers as shown in Figure 4.1
- Tree Leader Dead, Lower Portion Alive: The tree has lost more than 25% of its form because the central leader has died. However, the plant retains a generally tree-like form as shown in Figure 4.2, but may have multiple new leaders vying to replace the original.
- Plant Missing within Original Stakes or Cannot be Located: The plant could not be located in the field. In some instances, staking was found which indicates a plant was installed in that location, but the plant was not visible within the enclosure. However, most of the time, neither the stakes nor the plant could be located in the vicinity shown on the record drawings.

The diagrams in Exhibit C show all plant material currently in acceptable condition, as well as locations for plants that changed status to dead or otherwise unacceptable in 2017. For clarity of the diagrams, all plants that were previously coded as unacceptable in 2015 or 2016 are shown by outline only.

Figure 4.1: Original Plant Dead, Re-growing from Root

Figure 4.2: Tree Leader Dead, Lower Portion Alive

4.3 Restored Banks

Bank monitoring is required to be performed for three years following construction with at least one event occurring after a storm that equals or exceeds the bankfull discharge (approximately 2-year recurrence interval). The *Conceptual Design Report* (BBL, 2002) indicates 1,090 cubic feet per second (cfs) as the 2-year storm flow for the West Branch of the DuPage River based on data from US Geological Survey Gage #5540094 located near the Warrenville Dam. Restoration of the banks within the Reach 8A and 8B study area was completed during November 2013. Two areas on Ferry Creek along the east and south side of Reach 8, Area 12 were repaired and stabilized in July 2017.

The primary metric for restored banks is visual stability. Instability is noted as erosion features that threaten the integrity of the banks or in-stream structure. The limits of the "bank" extend from the toe of the slope to the break in the slope. Signs of erosion include undercutting, lateral erosion above rock toe protection, exposed geotextile fabric, or vertical erosion down the face of the bank from overland flows. Stability is evaluated based on observations of the bank and in-stream structures as compared to design drawings, considering location in the stream, physical dimensions, and consistency with adjacent, undisturbed banks.

Each stretch of the study area in Reach 8B was inspected in 2017. Construction of the Ferry Creek streambank repair was observed and photographed during each site visit in July and August of 2017. These areas were also inspected in November 2017. Stable areas of Reach 8B that did not require repair (West Branch of the DuPage River) were inspected on December 6, 2017.

5.0 Monitoring Results

The results of the monitoring activities performed during 2017 in Reaches 5E, 8A, 8B, the Mack Road Staging Area, and Reach 5D Upland Savanna are presented as follows on a reach-specific basis.

5.1 Reach 5E

Herbaceous Vegetation

Standards:

- 90% vegetative cover
- <5% cover of invasive weeds
- Native Mean C ≥3.5 during year three
- Native Mean C, FQI, and native RIV must increase from year one to three after planting
- No areas > 0.5 m devoid of vegetation
- Three most dominant species native

Actual cover:	82.7%
Actual cover of invasive weeds:	48.2%
Native Mean C value:	3.19
Native FQI:	33.47
Native RIV:	45.0

Top five species RIV:

- Alsike clover (*Trifolium hybridum*) 15.3
- Queen Anne's lace (*Daucus carota)* 7.7
- Eastern daisy fleabane (*Erigeron annuus)* 6.8
- Yellow foxtail (*Setaria pumila)* 6.1
- White sweetcover (*Melilotus albus*) 4.4

Performance standards were not met in Reach 5E because none of the six criteria were met.

Signoff is not recommended.

Please see Appendices B, C and D for inventory and quadrat data, and representative photographs.

Tree and Shrub Survival

The 2012 Annual Monitoring Report final document stated: "The tree and shrub survival performance standard was met on government property during 2010 and further woody plant monitoring requirements were terminated in accordance with ICN No.13 (Page 9)." Therefore, tree and shrub monitoring was not conducted in Reach 5E during 2017.

Restored Banks

The third year of required bank monitoring for Reach 5E was completed during 2011 and all banks were concluded to be stable. Therefore, no bank monitoring was performed in Reach 5E during 2017.

5.2 Reach 8A

Herbaceous Vegetation

Standards:

- 90% vegetative cover
- <5% cover of invasive weeds
- Native Mean C ≥3.5 during year three
- Native Mean C, FQI, and native RIV must increase from year one to three after planting
- No areas > 0.5 m devoid of vegetation
- Three most dominant species native

Actual cover:	90.0%
Actual cover of invasive weeds:	8.7%
Native Mean C value:	3.29
Native FQI:	35.84
Native RIV:	83.7

Top five species RIV:

- Brown-eyed Susan (*Rudbeckia triloba*) 12.0
- Late-flowering thoroughwort (*Eupatorium serotinum*) 9.3
- White panicled aster (*Symphyotrichum lanceolatum)* 6.5
- Canadian goldenrod (*Solidago canadensis*) 5.8
- Lady's thumb (*Persicaria maculosa*) 5.1

Performance standards were not met in Reach 8A because standards were met for only three of the six criteria. **Signoff is not recommended.**

Please see Appendices B, C and D for inventory and quadrat data, and representative photographs.

Tree and Shrub Survival

Reach 8A Bower Elementary School Site: Plantings at the Bower Elementary School site were assessed separately from the naturalized areas. Based on the landscape character of the school site and the May 2017 completion of the one-year warranty period for replacement plantings, we recommend signoff and termination of monitoring. No other tree and shrub monitoring is required in Reach 8A. **Signoff recommended.**

5.3 Reach 8B

Herbaceous Vegetation

Standards:

- 90% vegetative cover
- <5% cover of invasive weeds
- Native Mean C ≥3.5 during year three
- Native Mean C, FQI, and native RIV must increase from year one to three after planting
- No areas > 0.5 m devoid of vegetation
- Three most dominant species native

Actual cover:	98.9%
Actual cover of invasive weeds:	5.2%
Native Mean C value:	3.87
Native FQI:	55.24
Native RIV:	78.1

Top five species RIV:

- Canadian goldenrod (*Solidago canadensis*) 9.5
- Yellow indian grass (*Sorghastrum nutans)* 8.3
- White-panicled Aster (*Symphyotrichum lanceolatum)* 5.4
- Kentucky blue grass (*Poa pratensis)* 3.9
- Yellow bristle grass (*Setaria pumila)* 3.4
- Oswego-tea (*Monarda fistulosa)* 3.4

Performance standards were not met in Reach 8B because only four of six criteria were met. Invasive weed coverage exceeded 5% and was one of the criteria not met. **Signoff not recommended.**

Please see Appendices B, C and D for inventory and quadrat data, and representative photographs.

Tree and Shrub Survival

Tables 5.1 and 5.2 indicate individual species survival rates observed in Reach 8B on Forest Preserve property as compared to the 2015 baseline, with locations as documented by the diagrams in Exhibit C. The 2017 monitoring located a *Crataegus crus-gali* in good condition which had previously been recorded as missing during the 2015 and 2016 monitoring. The stakes for the plant had been knocked over and it was previously obscured by tall prairie vegetation. The species count in Table 5.2 was updated to reflect this acceptable plant, and the location has been marked for the stakes to be reset in 2018. Tables 5.3 and 5.4 provide additional details for plants coded in unacceptable condition for 2016 and 2017, including which plants were dead, were regrowing from the root, had a dead leader, or were missing.

Construction for a bridge expansion project over the West Branch DuPage River at the McDowell Grove Forest Preserve was also observed during the 2017 monitoring visit. Several trees and shrubs were observed to have been damaged or removed by the construction activities. Other trees were located within the construction limits, and although they did not appear damaged at the time of observation, these may exhibit future stress from compaction of their root zone. Per discussion with the Local Communities, these impacted plants will be removed from WCERT's management responsibility. Locations of the plants are noted on the diagrams in Exhibit C, and the plant totals in Tables 5.1 and 5.2 have been revised accordingly. The site will be evaluated at the completion of bridge construction to assess if any additional plants were damaged, and further modifications will be made to WCERT's management area if necessary.

Similarly, construction was completed in 2017 to repair bank erosion along Ferry Creek. This project removed two *Amorpha fruticosa* shrubs which had previously been noted as being in acceptable condition. However, as this construction was undertaken by WCERT, it remains their responsibility to replace these shrubs. Therefore, the two shrubs were coded as "Dead" for the 2017 monitoring period.

Overall, woody plant material in the natural areas of Reach 8B had an 78.9% rate of survival as compared to the 2015 data, categorized as 77% survival of shrubs (158 of 206 plants) and 82% of trees (119 of 145). Since the 2016 monitoring period, the site lost an additional 12 shrubs and 22 trees. This overall rate of survival does not meet the established performance criteria of 90% survival. **Signoff not recommended.**

Table 5.1 Survival rates of individual tree species in Reach 8B on Forest Preserve property.

Symbol	Scientific Name	Common Name	Initial Number Planted	Removed Due to 2017 Construction	Total under WCERT Management	Condition Acceptable 2015	Condition Acceptable 2017	Percent Survived
AG	Aesculus glabra	Ohio Buckeye	11	1	10	8	7	88%
AT	Asimina triloba	PawPaw	11		11	9	7	78%
BN	Betula nigra	River Birch	23		23	22	14	64%
CAR	Carpinus caroliniana	Bluebeech	10		10	7	5	71%
CCO	Carya cordiformis	Bitternut Hickory	23		23	9	9	100%
COV	Carya ovata	Shagbark Hickory	19		19	13	13	100%
CO	Celtis occidentalis	Hackberry	4		4	2	1	50%
CEC	Cercis canadensis	Eastern Redbud	16	2	14	9	8	89%
JN	Juglans nigra	Black Walnut	4		4	1	1	100%
MR	Morus rubra	Red Mulberry	4		4	3	2	67%
OV	Ostrya virginiana	Ironwood	21		21	10	10	100%
PO	Platanus occidentalis	Sycamore	10	1	9	8	7	88%
QA	Quercus alba	White Oak	21		21	4	4	100%
QB	Quercus bicolor	Swamp White Oak	16		16	11	9	82%
QC	Quercus coccinea	Scarlet Oak	20		20	3	2	67%
QM	Quercus macrocarpa	Bur Oak	32	1	31	16	16	100%
QV	Quercus velutina	Black Oak	13		13	4	3	75%
SN	Salix nigra	Black Willow	19	1	18	6	1	17%
TOTALS			**277**	**6**	**271**	**145**	**119**	**82%**

Table 5.2 Survival rates of individual shrub species in Reach 8B on Forest Preserve property.

Symbol	Scientific Name	Common Name	Initial Number Planted	Removed Due to 2017 Construction	Total under WCERT Management	Condition Acceptable 2015	Condition Acceptable 2017	Percent Survived
AF	Amorpha fruiticosa	Indigo bush	21		21	20	13	65%
COC	Cepholanthus occidentalis	Buttonbush	11		11	9	9	100%
CS	Cornus stolonifera	Red Osier Dogwood	26	1	25	14	6	43%
CA	Corylus americana	American Hazelnut	38		38	35	34	97%
CCG	Crataegus crus-gali	Cockspur Hawthorn	40		40	16	14	88%
CM	Crataegus mollis	Downy Hawthorn	21		21	4	3	75%
PA	Prunus americana	Wild Plum	20		20	9	7	78%
PT	Ptelea trifolitata	Wafer Ash	20		20	9	8	89%
RA	Ribes americanum	Wild Black Currant	11		11	9	9	100%
RS	Rosa setigera	Illinois Rose	20		20	19	17	89%
SD	Salix discolor	Pussy Willow	18		18	2	2	100%
SC	Sambucus canadensis	Common elderberry	23		23	7	1	14%
VL	Viburnum lentago	Nannyberry	8		8	5	4	80%
VP	Viburnum prunifolium	Blackhaw	20		20	19	16	84%
XA	Xanthoylum americanum	Prickly Ash	30		30	29	15	52%
TOTALS			**327**	**1**	**326**	**206**	**158**	**77%**

Table 5.3 Recorded unacceptable conditions for individual tree species in Reach 8B, 2016 - 2017.

Symbol	Scientific Name	Common Name	Dead 2016	Dead 2017	Regrowing from Root 2016	Regrowing from Root 2017	Leader Dead 2016	Leader Dead 2017	Missing 2016	Missing 2017
AG	Aesculus glabra	Ohio Buckeye		1						
AT	Asimina triloba	PawPaw					2			
BN	Betula nigra	River Birch		8						
CAR	Carpinus caroliniana	Bluebeech	1	1						
CCO	Carya cordiformis	Bitternut Hickory								
COV	Carya ovata	Shagbark Hickory								
CO	Celtis occidentalis	Hackberry			1					
CEC	Cercis canadensis	Eastern Redbud	1							
JN	Juglans nigra	Black Walnut								
MR	Morus rubra	Red Mulberry	1							
OV	Ostrya virginiana	Ironwood								
PO	Platanus occidentalis	Sycamore				1				
QA	Quercus alba	White Oak								
QB	Quercus bicolor	Swamp White Oak		1					1	
QC	Quercus coccinea	Scarlet Oak					1			
QM	Quercus macrocarpa	Bur Oak								
QV	Quercus velutina	Black Oak	1							
SN	Salix nigra	Black Willow		4					1	
TOTALS			**4**	**15**	**1**	**1**	**3**	**0**	**2**	**0**

Table 5.4 Recorded unacceptable conditions for individual shrub species in Reach 8B, 2016 - 2017.

Symbol	Scientific Name	Common Name	Dead 2016	Dead 2017	Missing 2016	Missing 2017
AF	Amorpha fruiticosa	Indigo bush	2	2	3	
COC	Cepholanthus occidentalis	Buttonbush				
CS	Cornus stolonifera	Red Osier Dogwood	6	2		
CA	Corylus americana	American Hazelnut	1			
CCG	Crataegus crus-gali	Cockspur Hawthorn	2			
CM	Crataegus mollis	Downy Hawthorn	1			
PA	Prunus americana	Wild Plum		1	1	
PT	Ptelea trifolitata	Wafer Ash	1			
RA	Ribes americanum	Wild Black Currant				
RS	Rosa setigera	Illinois Rose	2			
SD	Salix discolor	Pussy Willow				
SC	Sambucus canadensis	Common elderberry	1	6		
VL	Viburnum lentago	Nannyberry	1			
VP	Viburnum prunifolium	Blackhaw	1		1	1
XA	Xanthoylum americanum	Prickly Ash	12	1	1	
TOTALS			**30**	**12**	**6**	**1**

Bank Stability

Data from US Geological Survey Gage #5540095 located near the Warrenville Dam indicates that five events at or greater than the 2-year storm (1,090 cfs) occurred between November 2013 and November 2017 per Figure 5.1. Arrows on the graph below indicate these events.

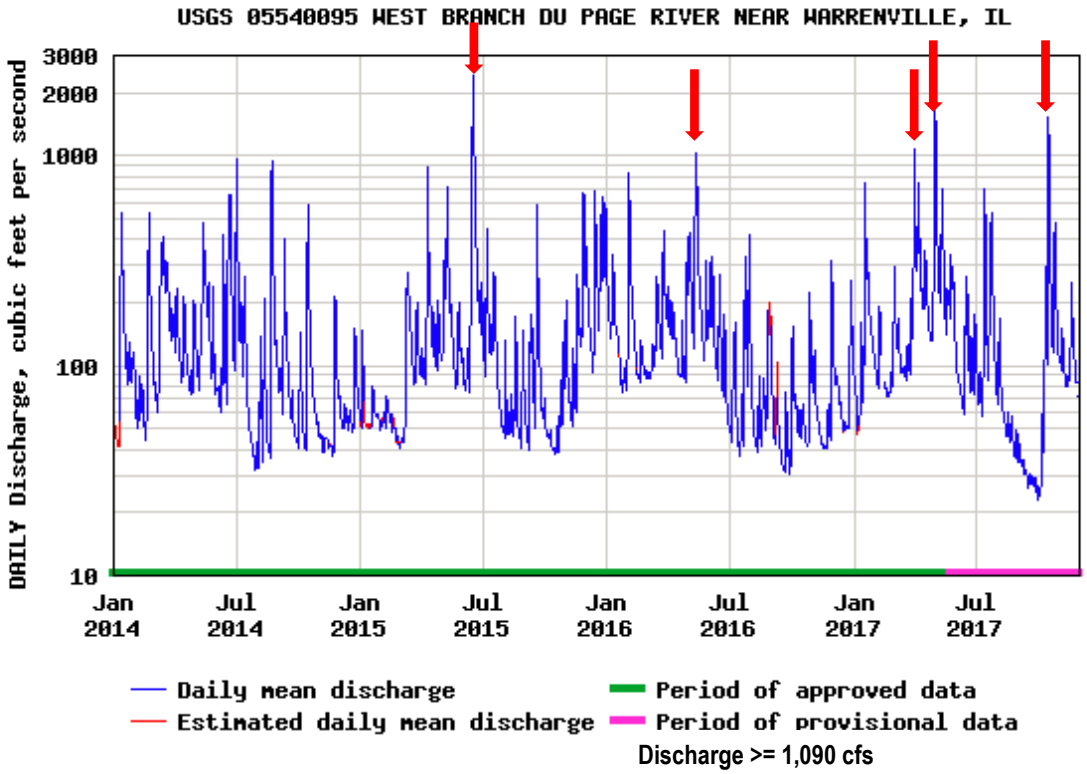


Figure 5.1: Events greater than 2-year storm (1,090 cfs) at USGS Gage #5540095, November 2013 – November 2017.

The condition of banks and structures were stable within the study area except for two locations on Ferry Creek at McDowell Grove Forest Preserve. These two areas were repaired and stabilized during summer 2017 and will be monitored during 2018.

The first restored area is found along an approximately 180' long stretch of the right bank where Ferry Creek discharges into the West Branch of the DuPage River (Figures 5.2 and 5.3). A combination of 18"-36" boulders and 3"-10" cobles were pressed into the bank to provide scour protection at the bend in the creek. Stone extended from the toe of the slope at the bottom of the channel to 12" beyond (horizontally) the bank full elevation.

The second restored area occurred on a 75' long stretch of the right bank of a riffle / grade control structure in Ferry Creek approximately 700 feet upstream of the confluence of Ferry Creek and the West Branch of the DuPage River. Figure 5.2 indicates the location of the repaired area on Ferry Creek, and Figure 5.4 is a photograph of the repaired right bank and riffle. 3"-10" cobble was pressed into the bank to prevent the creek from further eroding the banks and bypassing the riffle structure. Stone extended from the toe of the slope at the bottom of the channel to 12" beyond (horizontally) the bank full elevation. Boulders in the riffle were adjusted to allow debris to flow more freely between the stones and prevent future debris jams.

Representative photographs of stable reaches are included in Appendix D.

Figure 5.2: Approximate limits of eroded banks on Ferry Creek.

Figure 5.3: Bank repair on right bank of Ferry Creek, north of the Area 9 peninsula.

Figure 5.4: Looking downstream at the riffle and the repaired right bank.

5.4 Mack Road Staging Area and Reach 5D Upland Savanna

Mack Road Staging Area Herbaceous Vegetation

Monitoring results below apply to the Mack Road Staging Area. No management was conducted in this area during 2017.

Standard:

- 90% native vegetative cover

Actual Cover:	97.4%
Native Cover	89.6%
Native Mean C value:	3.14
Native FQA:	14.71
Native RIV:	88.9

Top five species RIV:

- Big bluestem (*Andropogon gerardii*): 33.2
- Indiangrass (*Sorghastrum nutans*): 25.6
- Canadian goldenrod (*Solidago canadensis*) 11.7
- Kentucky blue grass (*Poa pratensis*) 3.6
- Meadow fescue (*Schedonorus pratensis*) 2.3

Mack Road Staging Area is meeting the standard of 90% native vegetation cover.

Mack Road Reach 5D Upland Savanna Herbaceous Vegetation

Standard:

- 90% vegetative cover
- <5% cover of invasive weeds
- Native Mean C ≥3.5 during Year three
- Native Mean C, FQI, and native RIV must increase from Year one to three after planting
- No areas > 0.5 m devoid of vegetation
- Three most dominant species native

Actual Cover:	95.2%
Native Cover	44.1%
Native Mean C value:	3.19
Native FQA:	23.21
Native RIV:	47.6

Top five species RIV:

- Chinese cup grass (*Eriochloa villosa*): 24.6
- Canadian horseweed (*Elymus canadensis*): 14.9
- Sweet coneflower (*Rudbeckia subtomenosa*)7.3

- Virginia wild rye (*Elymus virginicus*) 6.8
- Green foxtail (*Setaria viridis*) 6.3

Reach 5D has met only three of six performance standards**. Signoff is not recommended for Reach 5D Upland Savanna and Mack Road Staging area**.

Please see Appendices B, C and D for inventory and quadrat data, and representative photographs.

Tree and Shrub Survival

At the Mack Road Staging Area, individual species survival rates were observed, with locations per Tables 5.5 and 5.6 and as documented by the diagrams in Exhibit C. Tables 5.7 and 5.8 provide additional details for plants coded in unacceptable condition for 2016 and 2017. This included plants that were dead, regrowing from the root, had a dead leader, or were missing.

Overall, woody plant material at the Mack Road Staging Area had an 89.45% rate of survival, categorized as 84% survival of shrubs (136 of 162 plants) and 99% of trees (93 of 94). Since the 2016 monitoring period, the site lost an additional three shrubs and one tree. This overall rate of survival barely misses the established performance criteria of 90% survival, by one plant. **Signoff not recommended.**

Table 5.5 Individual tree species survival rates at the Mack Road Staging Area.

Symbol	Scientific Name	Common Name	Initial Number Planted	Condition Acceptable 2015	Condition Acceptable 2017	Percent Survived
CCO	Carya cordiformis	Bitternut Hickory	27	19	19	100%
COV	Carya ovata	Shagbark Hickory	25	23	23	100%
JN	Juglans nigra	Black Walnut	3	3	3	100%
OV	Ostrya virginiana	Hophornbeam	25	21	20	95%
QA	Quercus alba	White Oak	38	7	7	100%
QM	Quercus macrocarpa	Bur Oak	54	10	10	100%
QV	Quercus velutina	Black Oak	38	11	11	100%
TOTALS			**210**	**94**	**93**	**99%**

Table 5.6 Individual shrub species survival rates at the Mack Road Staging Area.

Symbol	Scientific Name	Common Name	Initial Number Planted	Condition Acceptable 2015	Condition Acceptable 2017	Percent Survived
CA	Corylus americana	American Hazelnut	78	72	72	100%
CCG	Crataegus crus-gali	Cockspur Hawthorn	20	17	15	88%
CM	Crataegus mollis	Downy Hawthorn	13	8	8	100%
LP	Lonicera prolifera	Yellow Honeysuckle	12	4	4	100%
MI	Malus ioensis	Iowa Crabapple	16	9	7	78%
PA	Prunus americana	Wild Plum	25	12	7	58%
PV	Prunus virginiana	Choke Cherry	22	15	7	47%
PT	Ptelea trifolitata	Wafer Ash	19	3	2	67%
VP	Viburnum prunifolium	Blackhaw	16	16	11	69%
XA	Xanthoxylum americanun	Prickly Ash	16	6	3	50%
TOTALS			**237**	**162**	**136**	**84%**

Table 5.7 Recorded unacceptable conditions for individual tree species at Mack Road, 2016 - 2017.

Symbol	Scientific Name	Common Name	Dead 2016	Dead 2017	Missing 2016	Missing 2017
CCO	Carya cordiformis	Bitternut Hickory				
COV	Carya ovata	Shagbark Hickory				
JN	Juglans nigra	Black Walnut				
OV	Ostrya virginiana	Hophornbeam		1		
QA	Quercus alba	White Oak				
QM	Quercus macrocarpa	Bur Oak				
QV	Quercus velutina	Black Oak				
TOTALS			**0**	**1**	**0**	**0**

Table 5.8 Recorded unacceptable conditions for individual shrub species at Mack Road 2016 - 2017.

Symbol	Scientific Name	Common Name	Dead 2016	Dead 2017	Missing 2016	Missing 2017
CA	Corylus americana	American Hazelnut				
CCG	Crataegus crus-gali	Cockspur Hawthorn			2	
CM	Crataegus mollis	Downy Hawthorn				
LP	Lonicera prolifera	Yellow Honeysuckle				
MI	Malus ioensis	Iowa Crabapple		2		
PA	Prunus americana	Wild Plum	3		2	
PV	Prunus virginiana	Choke Cherry	5	1	2	
PT	Ptelea trifolitata	Wafer Ash	1			
VP	Viburnum prunifolium	Blackhaw	3		2	
XA	Xanthoxylum americanun	Prickly Ash	3			
TOTALS			**15**	**3**	**8**	**0**

6.0 Discussion

6.1 Herbaceous Vegetation

Reach 5E

Reach 5E met none of the six performance standards. The native Mean C and FQI increased from 2015, but native RIV dropped from 56.5 in 2015 to 45.0 in 2017. The native Mean C was below 3.5 (3.19), total vegetation cover was 82.7%, invasive weeds occupied 48.2% of herbaceous ground cover, and patches of bare ground exceeded 0.5 square meters. The site was blanket herbicided during 2016 and burned and reseeded during the fall. In 2017, the site was dominated by clover, sweet clover, black medic, plantain, fleabane, and Queen Anne's lace.

Portions of Reach 5E were brushed during the spring, and the upland savanna was spot herbicided once in August. Based on poor performance of the site, the decision was made to re-seed the upland savanna next spring (2018). As a result, the site was broadcast herbicided in October 2017and will be disked and reseeded in spring 2018 with a modified savanna seed mix. This modified mix will include more prairie species and less woodland and wetland species. Other recommendations include checking and spot herbiciding reed canary grass and *Phragmites* along the river (in restored floodplain area) in the spring.

Reach 8A

Reach 8A met or exceeded three of the six performance standards for 2017. The ground cover was 90%, the three most dominant species were native, and the Native Mean C, FQI, and RIV increased in 2017. However, the native Mean C was 3.29, invasive weeds composed 8.7% of the herbaceous ground cover, and patches of bare ground exceeded 0.5 square meters. This is an improvement from last year (2016) when only one (Increase in FQI and RIV) of six performance standards were met. Total cover was higher and non-native (weed) cover was lower in 2017 than in 2016, and creeping Charlie was no longer a dominant due to aggressive management of these sites this season. All of these sites were herbicided this season and were mowed or had invasive woody species removed and are expected to have greater total and native cover in 2018. Weeds present within the reach along the river include reed canary grass, giant ragweed, teasel, Queen Anne's lace, *Phragmites*, and common buckthorn. Herbaceous weeds present in Pod 8-3 included giant ragweed, garlic mustard and creeping Charlie. Woody weedy species included box elder, honeysuckle, and buckthorn. Please note that signoff is considered separately for Reach 8A and Reach 8B per the 2015 Annual Monitoring Report.

The following summarizes the condition and recommended treatments for Reach 8A by area:

- Pod R8-3. Site was herbicided in early July for honeysuckle. In early August, invasive woody species were cut and treated again, thistle and burdock were spot herbicided, ragweed and pokeweed were mowed, and bindweed was pulled. Recommendations for 2018 include spot herbiciding giant ragweed, garlic mustard, and creeping Charlie in the spring.

- Area 4. Area was spot herbicided for garlic mustard, reed canary grass, and creeping Charlie in late May, July, and August. Buckthorn was removed in July, and the site was mowed in September. Recommendations for 2018 include spot herbiciding teasel and other weeds and installing plant plugs in the spring.

- Areas 5. Area was spot herbicided three times during the spring and summer for reed canary grass, moneywort, and giant ragweed. Honeysuckle and box elder were removed in August. Recommendations for

2018 include continued spot treating creeping Charlie, *Phragmites*, and other weeds in the north area and reed canary grass and other weeds in the south area in the spring and overseeding the south area and installing plant plugs after herbiciding.

- Area 6. This area was spot herbicided in May, July, and August for reed canary grass, purple loosestrife, *Phragmites,* and giant ragweed. Giant ragweed and black locust were removed in early August. Recommendations for spring 2018 include spot-herbicide treatment of *Phragmites*, creeping Charlie, reed canary grass and other weeds and overseeding bare spots in the southern area and installing plant plugs in both areas.

Reach 8B

Reach 8B met or exceeded four out of six performance standards. Total vegetation cover was 98.9%, the native Mean C was 3.87, and the three most dominant species were native. Native Mean C, FQI, and RIV all increased between 2015 and 2017. However, invasive weeds comprised greater than 5% (5.2%) of the herbaceous ground cover, and patches of bare ground exceed 0.5 square meters. This is an improvement from last year (2016) when two of six performance standards were met. The greatest improvement was the decrease in non-native weeds from 21.0% to 5.2% and an increase in native FQI from 33.24 to 55.24. Weeds present within the reach include sweet clover, common ragweed, giant ragweed, Canada thistle, crown vetch, clover, and *Phragmites*. Woody weedy species include honeysuckle and buckthorn, black locust, silver maple, and cottonwood saplings and re-sprouts.

The following summarizes the condition and recommended treatments for Reach 8B by area:

- Area 11: This area is a narrow strip along the south and east banks of the DuPage River near the McDowell Grove parking area off Raymond Drive. No management was performed after July due to construction of a new bridge on the West drive over DuPage River. The area was spot herbicided and overseeded in May. Reed canary grass, ragweed, and creeping Charlie were spot herbicided again in July. Burning is recommended for spring 2018 in the area north of the drive followed by spot herbiciding Canada goldenrod and giant ragweed and then seeding with native grasses and installing native wetland plants (e.g. sedges) on the shelf along the shoreline. Most of the area south of the drive (T2) was disturbed by the bridge construction and, according to an email from the county on November 22, 2017, WCERT is not responsible for repairing or restoring this area. Nor is WCERT responsible for repairing or restoring the area immediately north of the new bridge that was also disturbed during construction.

- Area 12. This is the largest (8.98 acres) area within Reach 8B. This area was spot herbicided for clover, sweet clover, thistle, Canada goldenrod, and other weeds in May, early July and early August. The northern section was over-seeded in June. Ragweed, Queen Anne's lace, sweet clover, and cottonwood were mowed in early August. On October 13, the access routes used for the stream bank repair project were blanket herbicided in preparation for seeding later this fall (December). Recommendations for 2018 include burning in the spring, spot herbiciding Canada goldenrod and giant ragweed in the area near the river (e.g. T6, T7 and T8) and Canada goldenrod and non-native cool-season grass at the north end of T3 andT4 and in the swales. The north end of T3 and T4 will also be mowed later in the spring.

Mack Road Staging Area and Reach 5D Upland Savanna

The Mack Road Staging Area achieved the performance standard of 90% native vegetative cover in 2016. No maintenance was completed in 2017.

The Reach 5D Upland Savanna area has to meet the full set of performance standards. This area was spot herbicided in late May, July, and August and mowed in July and September. Only one standard, total vegetation cover >90%, was met this year. This area will be mowed, spot herbicided, plugged with native grasses and forbs in 2018. Sign off for both the Mack Rd. Staging area and Reach 5D Upland Savanna is not recommended.

6.2 Tree and Shrub Survival

After having met the criteria for 90% survival of woody plant material in 2016, the loss of four plants in 2017 pushes the Mack Road / Reach 5D Upland Savanna site just under the threshold at 89.45% survival. Trees continue to perform significantly better than shrubs, as only one tree has been lost since the 2015 season. Given that many of the shrubs are still small in stature compared to the prairie grasses surrounding them and that the existing staking materials were observed to be in poor condition and falling apart during the 2015 monitoring, it is still highly possible that the eight missing plants were broken off or trampled by the maintenance contractor during work to remove and reset staking materials. These shrubs may regrow from the root if they were only damaged, and become acceptable again as was observed in Reach 8 this year with a *Crataegus crus-gali*.

The Reach 8 site did not meet the established performance criteria of 90% survival in 2016 or 2017. In 2017, the largest losses were due to high beaver activity noted in April 2017 by the Local Communities. Although WCERT responded by upgrading beaver protection on the surviving trees, the damage was already done. Of the 16 trees lost in 2017, 14 were due to beaver damage. Especially hard hit were *Betula nigra* and *Salix nigra*. For shrubs, 12 plants were noted as dead, while another plant was noted as missing. However, this number includes two shrubs that were impacted by the bank stabilization. The overall percentage of acceptable material also decreased by a percentage point due to the bridge construction project with the removal of seven healthy trees from the calculation.

6.3 Restored Banks

The West Branch of the Du Page River in Reach 8A is stable. Two areas of eroding bank on Ferry Creek in the McDowell Grove Forest Preserve (Reach 8B) were repaired and stabilized during summer 2017.

The eroded bank on the north side of the confluence of Ferry Creek and the West Branch of the DuPage River was repaired and stabilized. The eroded right bank of the riffle structure on Ferry Creek approximately 700 feet upstream of the confluence of the creek with the DuPage River was repaired and tied into the adjacent bank.

Restoration of the two above areas was completed during summer 2017. They were inspected in late Summer and Fall and remained stable. These areas will be monitored for one year during 2018 and following a two year storm event. If the repaired areas remain stable, WCERT will request signoff.

In addition, disturbed vegetation in the access routes to the streambank restoration areas will be monitored until it meets performance standards required for the reach.

7.0 Conclusions and Recommendations

The following summarizes conclusions for each reach based on 2017 monitoring results and site inspections, and proposes management activities for specific areas for 2018. A projected schedule for 2018 monitoring and management activities is included in Appendix E.

7.1 Herbaceous Vegetation

Vegetation monitoring results and recommended management activities for each reach are summarized in Table 7.1. Management activities are summarized by task in Table 7.3 below.

Reach 5E

Performance: Reach 5E was broadcast herbicided twice in 2016 and burned and reseeded that fall. The site continued to be dominated by non-native vegetation in 2017 with the three most dominant species being weedy, two of which are non-native. Due to the site's poor performance, the upland savanna area of the site was broadcast herbicided again during fall of 2017.

Recommendations:

- Disc and broadcast herbicide the upland savanna in early spring 2018.
- Re-seed site in spring 2018 with modified savanna mix.
- Check and spot herbicide red canary grass and *Phragmites* along river (in restored floodplain area) in the spring.

Reach 8A

Performance: Reach 8A met only three of six performance standards. Note, signoff will be considered separately for Reach 8A and Reach 8B, per the 2015 Annual Monitoring Report.

Recommendations: Pod R8-3

- Cut and treat box elder, buckthorn, and honeysuckle in woods in fall 2017.
- Spot herbicide giant ragweed, garlic mustard, and creeping Charlie in spring 2018.

Recommendations: Area 4

- Spot herbicide teasel and other weeds in spring 2018.

Recommendations: Area 5

- Spot herbicide reed canary grass and other weeds spring 2018.
- Over-seed bare areas in spring 2018 after spot herbiciding.

Recommendations: Area 6

- Spot-herbicide creeping Charlie, *Phragmites,* and other weeds in north area in spring 2018.
- Spot-herbicide reed canary grass and other weeds in south area in spring 2018.
- Cut and remove box elder and mulberry in the north area in fall 2017.

- Over-seed south area in spring 2018 after herbiciding.

Reach 8B

Performance: Reach 8B met or exceeded four out of six performance standards. The ground cover was 98.9%, mean C was 3.87, the three most dominant species were native, and the Native Mean C, RIV, and FQI increased in 2017. However, invasive weed composed 5.2% of the herbaceous ground cover, and patches of bare ground exceeded 0.5 square meters.

Recommendations: Area 11 – T1 (North of drive)

- Burn during the spring 2018.
- Mow area with weed whips prior to burning.
- Seed with a few native wetland grasses in spring after the burn,
- Spot herbicide Canada goldenrod and giant ragweed spring 2018.
- Add approximately 100 wetland plugs on the bench along the shoreline near shelter.

Recommendations: Area 11 – T2 (South of drive)

- *WCERT is not responsible for repairing or managing area disturbed by bridge construction.*
- Spot herbicide Canada goldenrod and giant ragweed early spring 2018 in areas not disturbed by construction.

Recommendations: Area 12 – T3 & T4

- Burn area north of path in spring 2018.
- Spot herbicide after the burn Canada goldenrod, blue grass, and reed canary grass at north end, in swales, and other areas where dense.
- Mow north end in late spring.
- Area near Raymond Drive disturbed during bridge construction will need to be restored by others.

Recommendations: Area 12 – T5

- Areas are dominated by native species with few invasive species.
- Spot herbicide invasive species as needed during 2018.

Recommendations: Area 12 – T6

- Spot herbicide giant ragweed and Canada goldenrod in spring 2018.

Recommendations: Area 12 –T7

- Spot herbicide Canada goldenrod and giant ragweed in early spring 2018.
- Construction access route between T7 and T5 blanket herbicided and reseeded in fall 2017.
- Manage access route with spot herbiciding and mowing as needed.

Recommendations: Area 12 – T8

- Construction access route blanket herbicided and reseeded in fall 2017.
- Manage with spot herbiciding and mowing as needed.

Mack Road – Staging Area

Performance: Mack Road staging area achieved its performance standard (>90% native vegetation cover), but will not receive signoff until Reach 5D-Upland Savanna also meets performance standards.

Reach 5D Upland Savanna

Performance: Reach 5D-Upland Savanna met only three of six performance standards. Sign off for the upland savanna is not recommended.

Recommendations: This area will be mowed, spot herbicided, plugged with native grasses and forbs in 2018.

Table 7.1 2017 vegetation monitoring results by reach and management recommendations for 2018.

Reach	Standard	2017 Results			2018 Management Recommendations	Recommend Signoff?
5E	90% cover	82.7%			Disc and herbicide in spring; Re-seed with modified savanna mix; Check and spot herbicide RCG and *Phragmites* along river.	Not recommended. Percent cover under 90%, invasive weeds exceed 5%, Native C is below 3.5 and patches of bare ground exceeds 0.5 sq. meters, 2 of the 3 most dominant plants are non-native.
	<5% weeds	48.2%				
	Native C > 3.5	3.19				
	FQI	33.47				
	Native RIV	45.0				
	C, FQI, and RIVI increase	N/A				
	No Bare ground ≥ 0.5 square meter	No				
	3 most dominant species native?	Species	RIV	Native?		
		TRIHYB	15.3	No		
		DAUCAR	7.7	No		
		ERIANN	6.8	Yes		
8A	90% cover	90.0%			**Pod R8-3**: Spot herbicide giant ragweed, garlic mustard, and creeping Charlie in spring. **Area 4-6:** Spot herbicide weeds in spring. Overseed bare areas in Areas 5 and 6.	Not recommended. Invasive weeds exceed 5%, Native C is below 3.5 and patches of bare ground exceeds 0.5 sq. meters
	<5% weeds	8.7%				
	Native C > 3.5	3.29				
	FQI	35.84				
	Native RIV	83.7				
	C, FQI, and RIV increase	Yes				
	No Bare ground ≥ 0.5 square meter	No				
	3 most dominant species native?	Species	RIV	Native?		
		RUDTRI	12	Yes		
		EUPSER	9.3	Yes		
		SYMLAN	6.5	Yes		

Reach	Standard	2017 Results			2018 Management Recommendations	Recommend Signoff?
8B	90% cover	98.9%			**Area 11**: Burn north of bridge in the spring; Mow area with weed whips prior to burning Seed this area with wetland grasses after burn; Spot herbicide weeds in spring; Add plugs along shoreline near shelter. **Area 12:** Burn area north of path in Spring; Spot herbicide Canada goldenrod, cool season grasses, and other weeds throughout; Mow north end late spring; Manage access routes with spot herbiciding and mowing as needed.	Not recommended. Invasive weeds exceed 5% and patches of bare ground exceeds 0.5 square meters
	<5% weeds	5.2%				
	Native C > 3.5	3.87				
	FQI	55.24				
	Native RIV C, FQI, and RIV increase	78.1 Yes				
	No Bare ground ≥ 0.5 square meter	No				
	3 most dominant species native?	Species	RIV	Native?		
		SOLCAN	9.5	Yes		
		SORNUT	8.3	Yes		
		SYMLAN	5.4	Yes		
Mack Road Staging Area	90% native cover	89.6%			Spot herbicide non-native species.	Recommended when Reach 5D meets all standards.
5D Upland Savanna	90% cover	95.2%			Spot herbicide and mow weeds as needed; Install plugs with appropriate native grasses and forbs.	Not recommended. Invasive weeds exceed 5%; Native C below 3.5, patches of bare ground exceed 0.5 sq. meters, and 1 of the 3 most dominant plants are non native.
	<5% weeds	55.9%				
	Native C > 3.5	3.19				
	FQI	23.21				
	Native RIV	47.6				
	C, FQI, and RIVI increase	Yes				
	No Bare ground ≥ 0.5 square meter	Yes				
	3 most dominant species native?	Species	RIV	Native?		
		ERIVIL	24.6	No		
		ELYCAN	14.9	Yes		
		RUDSUB	7.3	Yes		

Table 7.2 2015-2017 vegetation monitoring results by reach.

Reach	Standard	2015 Results			2016 Results			2017 Results			Change From 2015
5E	90% cover	114.0%			N/A			82.7%			-31.3%
	<5% weeds	56.3%			N/A			48.2%			-8.1%
	Native C > 3.5	3.06			N/A			3.19			0.1
	Native FQI	25.22			N/A			33.47			8.3
	Native RIV	56.5			N/A			45			-11.5
	No Bare ground ≥ 0.5 square meter	Yes			N/A			No			N/A
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	1/3 Species Native
		POAPRA	17	No	N/A	N/A	N/A	TRIHYB	15	No	
		SYMLAN	11	Yes	N/A	N/A	N/A	DAUCAR	7.7	No	
		ANDGER	6.6	Yes	N/A	N/A	N/A	ERIANN	6.8	Yes	
8A	90% cover	111.6%			61.5%			90.0%			-21.6%
	<5% weeds	38.8%			15.1%			8.7%			-30.1%
	Native C > 3.5	2.93			2.93			3.29			0.36
	Native FQI	25.05			25.4			35.84			10.79
	Native RIV	54.4			77.6			83.7			29.3
	No Bare ground ≥ 0.5 square meter	No			No			No			No change
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	3/3 Species Native
		PHAARU	12	No	SYMLAN	16	Yes	RUDTRI	12	Yes	
		SYMLAN	12	Yes	GLEHED	12	No	EUPSER	9.3	Yes	
		SOLALT	11	Yes	RUDSUB	6.5	Yes	SYMLAN	6.5	Yes	

Reach	Standard	2015 Results			2016 Results			2017 Results			Change From 2015
8B	90% Cover	105.0%			94.3%			98.9%			-6.1%
	<5% weeds	36.0%			21.0%			5.2%			-30.8%
	Native C > 3.5	3.72			3.12			3.87			0.16
	Native FQI	44.76			33.21			55.24			19.31
	Native RIV	70.8			74.9			78.1			7.3
	No Bare ground ≥ 0.5 square meter	No			No			No			No change
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	No change
		SOLALT	9.2	Yes	SOLCAN	8	Yes	SOLCAN	9.5	Yes	
		PHAARU	5.2	No	ELYCAN	4.6	Yes	SORNUT	8.3	Yes	
		ELYVIR	4.5	Yes	ELYVIR	4.5	Yes	SYMLAN	5.4	Yes	
Mack Road Staging Area	90% native cover	85.2%			93.1%			89.6%			4.40%
5D Upland Savanna	90% cover	N/A			79.0%			95.2%			N/A
	<5% weeds	N/A			73.8%			55.9%			N/A
	Native C > 3.5	N/A			2.85			3.19			N/A
	Native FQI	N/A			17.77			23.21			N/A
	Native RIV	N/A			24.6			47.6			N/A

Reach	Standard	2015 Results			2016 Results			2017 Results			Change From 2015
	No Bare ground ≥ 0.5 square meter	N/A			No			Yes			N/A
	3 most dominant species native?	Species	RIV	Native?	Species	RIV	Native?	Species	RIV	Native?	N/A
		N/A	N/A	N/A	ECHPUR	19.6	Yes	ERIVIL	25	No	
		N/A	N/A	N/A	AVESAT	15.8	No	ELYCAN	15	Yes	
		N/A	N/A	N/A	SETVIR	26.7	No	RUDSUB	7.3	Yes	

*Only Native C, Native FQI, and Native RIV need to improve from Year 1 to Year 3 per the performance standard found in the Plan.

Table 7.3 Summary of proposed 2018 management activities by task.

Task	Reach(s)	Unit	Unit(s)	Schedule 2018
Burn	8B-Area 12	Acres	8.98	Q1
	8B-Area 11	Acres	0.53	Q1
Spot Herbicide (2-3 visits throughout the growing season)	8B-Area 12	Acres	8.98	Q2-Q3
	8B-Area 11	Acres	0.53	Q2-Q3
	8A-Area 6	Acres	0.23	Q2-Q3
	8A-Area 5	Acres	0.28	Q2-Q3
	8A-Area 4	Acres	0.35	Q2-Q3
	8A-Pod R8-3	Acres	0.14	Q2-Q3
	5D Upland Sav	Acres	0.23	Q2-Q3
	5E	Acres	4.57	Q2-Q3
Discing	5E	Acres	4.57	Q2
Supplemental Seeding	8B-Area 11	Acres	0.53	Q2-Q3
	8A-Area 5	Acres	0.28	Q2-Q3
	8A-Area 6	Acres	0.23	Q2-Q3
	5E	Acres	4.57	Q2-Q3
Install Plant Plugs	8B-Area 11	Acres	0.53	Q2
	8A-Area 6	Acres	0.23	Q2
	8A-Area 5	Acres	0.28	Q2
	8A-Area 4	Acres	0.35	Q2
	5D Upland Sav	Acres	0.23	Q2
Mow 1-2x	8B-Area 12	Acres	8.98	Q2-Q3
	8B-Area 11	Acres	0.53	Q2-Q3

7.2 Tree and Shrub Survival

The Mack Road / Reach 5D Upland Savanna site is currently just below meeting performance standards, with the survival of only one plant causing the calculation to drop below 90%. The area will continue to be monitored until the herbaceous vegetation of the Reach 5D Upland Savanna meets criteria, which will be eligible for completion at the end of the 2018 growing season. If the woody vegetation continues to perform the same at that time and none of the missing shrubs are found that increase the survival rate, it is recommended that a discussion be held with the Local Communities on the required number of plants needed in addition to the 2015 punch list replacements to satisfy conditions for sign off.

Although Reach 8 is short of meeting performance standards, we do not recommend providing replacement trees and shrubs at this time. Given that many of the woody plant losses appeared to be due to the intense management activities needed to control the herbaceous vegetation, any replacements made at this time will likely be impacted by the ongoing maintenance efforts. As Reach 8B herbaceous vegetation will not be eligible for signoff until fall 2018, we recommend to continue to assess the woody survival until that time in order to determine appropriate replacements in addition to the 2015 punch list.

We recommend formally terminating monitoring at the Bower Elementary School site, given that the one year planting warranty was successfully completed.

At both Mack Road and Reach 8, several stakes around trees and shrubs were observed to be loose. This likely happens as the staking materials naturally degrade or are bumped by maintenance crews or animals. The stakes are scheduled to be reset as a maintenance activity in spring 2018, as the ground was too hard in fall 2017 due to dry conditions.

7.3 Restored Banks

The West Branch of the DuPage River in Reach 8A is stable. Two areas of eroding bank on Ferry Creek in the McDowell Grove Forest Preserve (Reach 8B) were repaired and stabilized during summer 2017.

Restoration of the two areas on Ferry Creek was completed during Summer 2017. They were inspected in late Summer and Fall and remained stable. These areas will be monitored for one year during 2018 and following a two year storm event. If the repaired areas remain stable, WCERT will request signoff.

In addition, disturbed vegetation in the access routes to the streambank restoration areas will be monitored until it meets performance standards required for the reach.

7.4 Projection for Future Maintenance and Monitoring Activities

Maintenance and monitoring activities will continue until all areas meet established performance criteria and receive signoff. Based on the 2015 recommendation to blanket-herbicide and reseed, Reach 5E, Reach 5D Upland Savanna, and Reach 8A Area 4 will require three additional years of monitoring after seeding is complete in order to verify that the herbaceous vegetation establishment is successful. Reach 5D was reseeded June 4, 2016, and thus may be considered for signoff by the end of the 2018 growing season. Because access to Reach 5D is through the

Mack Road Staging Area, this entire area will also be maintained and monitored through at least the 2018 growing season. Reach 8A Area 4 was reseeded November 30, 2016, following summer herbicide applications. Therefore, the required three full growing seasons for monitoring of this area is anticipated to end during fall 2019. Also, because smaller subareas are not considered separately for signoff, all other areas of Reach 8A will also require monitoring through 2019. Reach 8B may be considered for signoff of herbaceous vegetation during fall 2018, as agreed upon by WCERT correspondence dated February 11, 2016, and will be monitored and managed until that time. The uplands savanna area of Reach 5E will be seeded again next spring (2018); thus, it won't be eligible for sign off until fall of 2020.

Warranty condition assessments for tree and shrub replacements were completed for Reach 7 and Bower Elementary School in May 2017, with required warranty replacements accepted in July 2017. WCERT's obligation for these sites was fulfilled at that time. Monitoring of trees and shrubs in Reach 8B and the Mack Road Staging Area will continue until these areas meet performance criteria, including the herbaceous vegetation as discussed above.

It is recommended that the entire stretch of Ferry Creek be monitored for one year following the remediation of the identified eroded banks, assuming that at least one bankfull discharge storm event occurs. Repairs on Ferry Creek were completed during summer 2017; as a result the creek will be ready for signoff by summer 2018. Bank monitoring on the West Branch DuPage River is complete.

8.0 References

ARCADIS. 2012. *2012 Annual Monitoring Report - Reaches 5C, 5D, 5E and 6*. Kress Creek/West Branch DuPage River Site, DuPage County, IL

BBL. 2005. *Conceptual Mitigation and Restoration Design Plan*. Kress Creek/West Branch DuPage River Site and the River Portion of the Sewage Treatment Plant Site, DuPage County, IL.

Swink F., Wilhelm G. 1994. *Plants of the Chicago Region*. Indianapolis (IN): Indiana Academy of Science. 921 p.

Darbyshire, S.J., C.E. Wilson et al. 2003. *The Biology of Invasive Alien Plants in Canada. 1. Eriochloa villosa (Thunb.) Kunth.* Canadian Journal of Plant Science. 2003, 83(4): 987-999.

SmithGroupJJR. 2016. 2015 Annual Monitoring Report- Reaches 5E, 7, 8, the Mack Road Staging Area, and the Route 59 Bridge Area of the Kress Creek/ West Branch DuPage River Site.

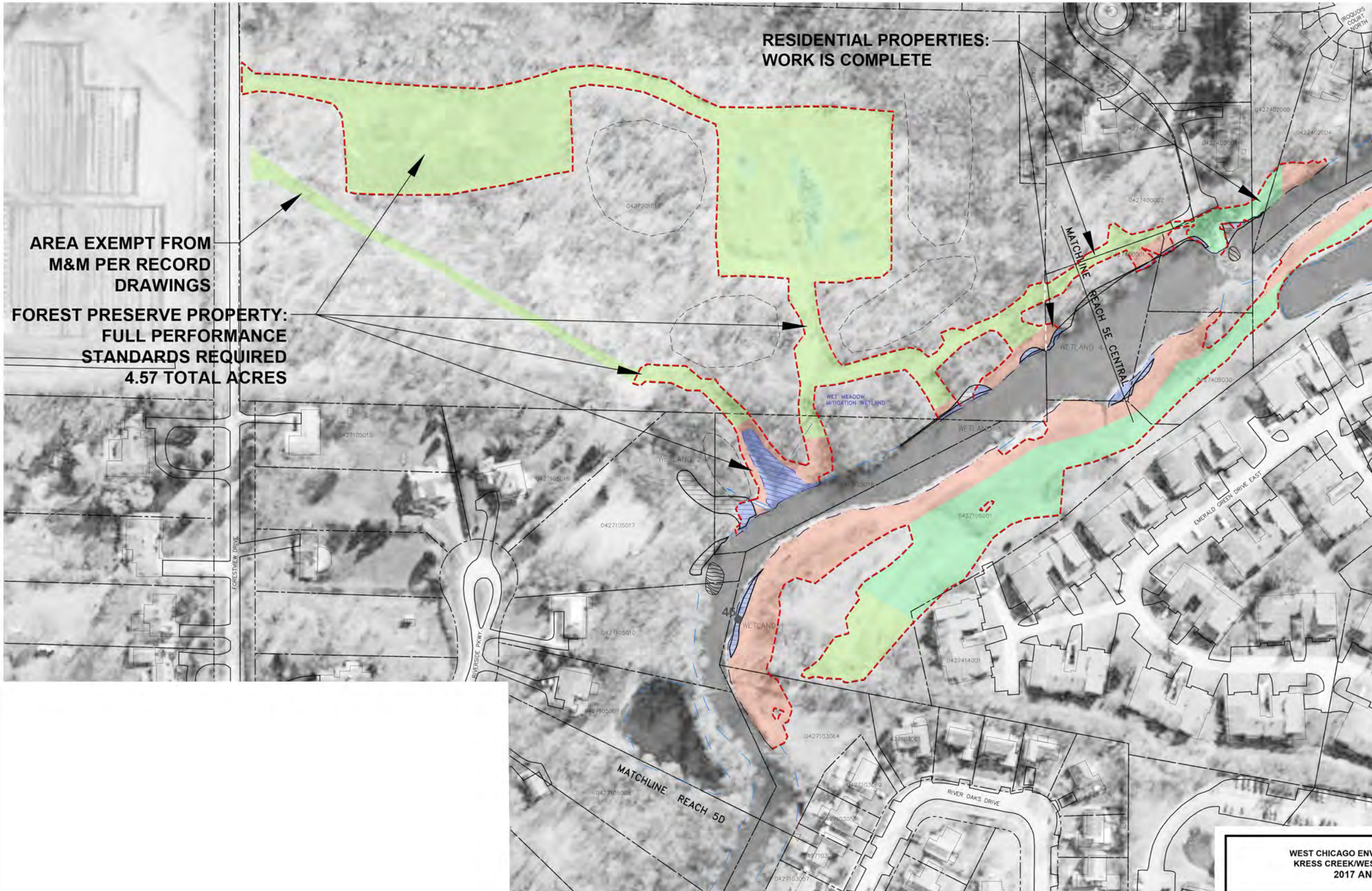
SmithGroupJJR and Applied Ecological Services. 2017. 2016 Annual Monitoring Report- Reaches 5D, 5E, 7, 8, and the Mack Road Staging Area of the Kress Creek/ West Branch DuPage River Site.

2017 Annual Monitoring Report

Reaches 5D, 5E, 8, and the Mack Road Staging Area of the Kress Creek / West Branch DuPage River Site

Exhibit A

Base Maps



LEGEND:

- LIMIT OFACTUAL DISTURBANCE
- PROPERTY LINE
- 0427201019 RESIDENTIAL PROPERTY REFERENCE NUMBER
- ARCHEOLOGICAL SITE
- WETLAND BOUNDARY
- WET MEADOW WETLAND
- MITIGATION WETLAND
- RESTORED UPLAND SAVANNA
- RESTORED WETLAND
- RESTORED SHADY FLOODPLAIN
- RESTORED LAWN
- RESTORED SAVANNA AND OPEN FLOODPLAIN
- EDGE OF WATER
- POOL

NOTE:

1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE WERE DEVELOPED BY BLASLAND, BOUCK & LEE FROM SURVEY DATA PROVIDED BY PROSOURCE TECHNOLOGIES, INC. (NOW KNOWN AS CARLSON PSI), DUPAGE COUNTY, AND TRONOX.

0 80' 160'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12A, TRACER NO. B0071030/0000/00026/DWG/71030G10.DWG, DATED 5/21/09. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 5E MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE 12-1

EXHIBIT A

POD R8-3: FULL PERFORMANCE STANDARDS REQUIRED (MAY 2014 PROGRESS RPT)
0.14 TOTAL ACRES

POD R8-40: RESIDENTIAL LOTS COMPLETE (MAY 2014 PROGRESS RPT)

POD R8-40:
PARCEL 04-35-404-013
RELEASED 08-11-2015

POD R8-4: RESIDENTIAL LOTS COMPLETE (MAY 2014 PROGRESS RPT)

MATCHLINE REACH 7

MATCHLINE DRAWING B-11B

BATAVIA ROAD

PERMANENT STONE PARKING LOT

MAIN STREET

WARRENVILLE ROAD

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH LAWN SEED PER TABLE 7 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH PRAIRIE DROPSEED

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11A

AREA 4: FULL PERFORMANCE STANDARDS REQUIRED, 0.35 ACRES
BANK STABILITY MONITORING REQUIRED, 450 LF

AREA 5: FULL PERFORMANCE
STANDARDS REQUIRED, 0.28 ACRES
BANK STABILITY MONITORING REQUIRED, 700 LF

AREA 3: NO M&M REQUIRED (9/27/13)
WEST BANK RELEASED FROM
BANK STABILITY MONITORING
(8/11/15)

APPROXIMATE BIKE TRAIL

APPROXIMATE BIKE TRAIL

MATCHLINE DRAWING B-11B

MATCHLINE DRAWING B-11D

RIVER ROAD

TOWNLINE ROAD

FOREST VIEW AVE S

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

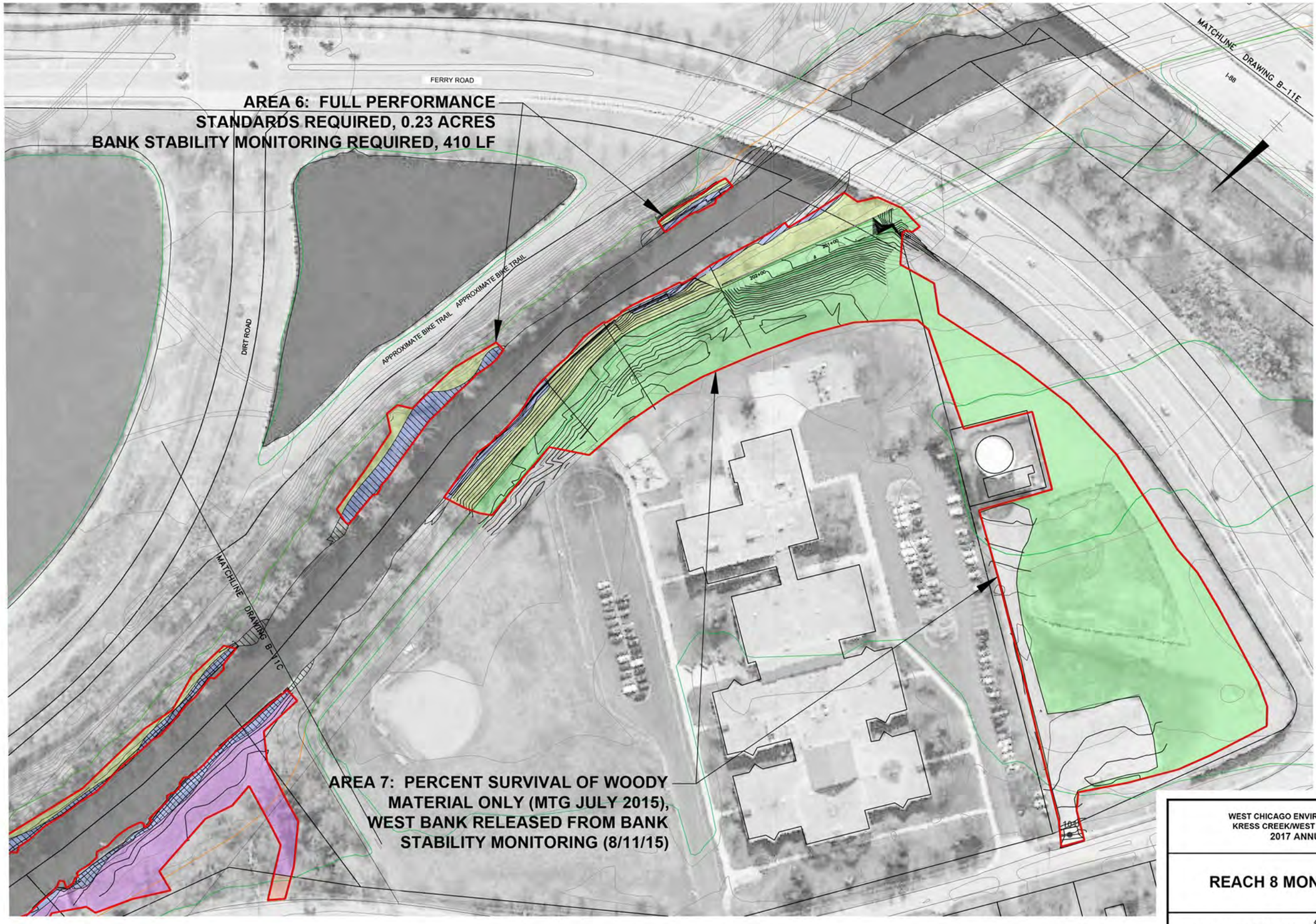
FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11C



NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11D

EXHIBIT A

AREA 10: NO M&M REQUIRED (9/27/13)

AREA 11: FULL PERFORMANCE STANDARDS REQUIRED, 2.86 ACRES BANK STABILITY MONITORING REQUIRED, 680 LF

AREA 9: NO M&M REQUIRED (9/27/13), BANK STABILITY MONITORING REQUIRED, 600 LF

MATCHLINE DRAWING B-11G

RAYMOND DRIVE

MATCHLINE DRAWING B-11I

GRAVEL PARKING LOT

FERRY CREEK: BANK STABILITY MONITORING REQUIRED TO CONFLUENCE WITH RIVER BOTH BANKS, 1500 LF TOTAL

AREA 12: FULL PERFORMANCE STANDARDS REQUIRED (EXCLUDES GRAVEL LOT) 8.98 ACRES (TOTAL)

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

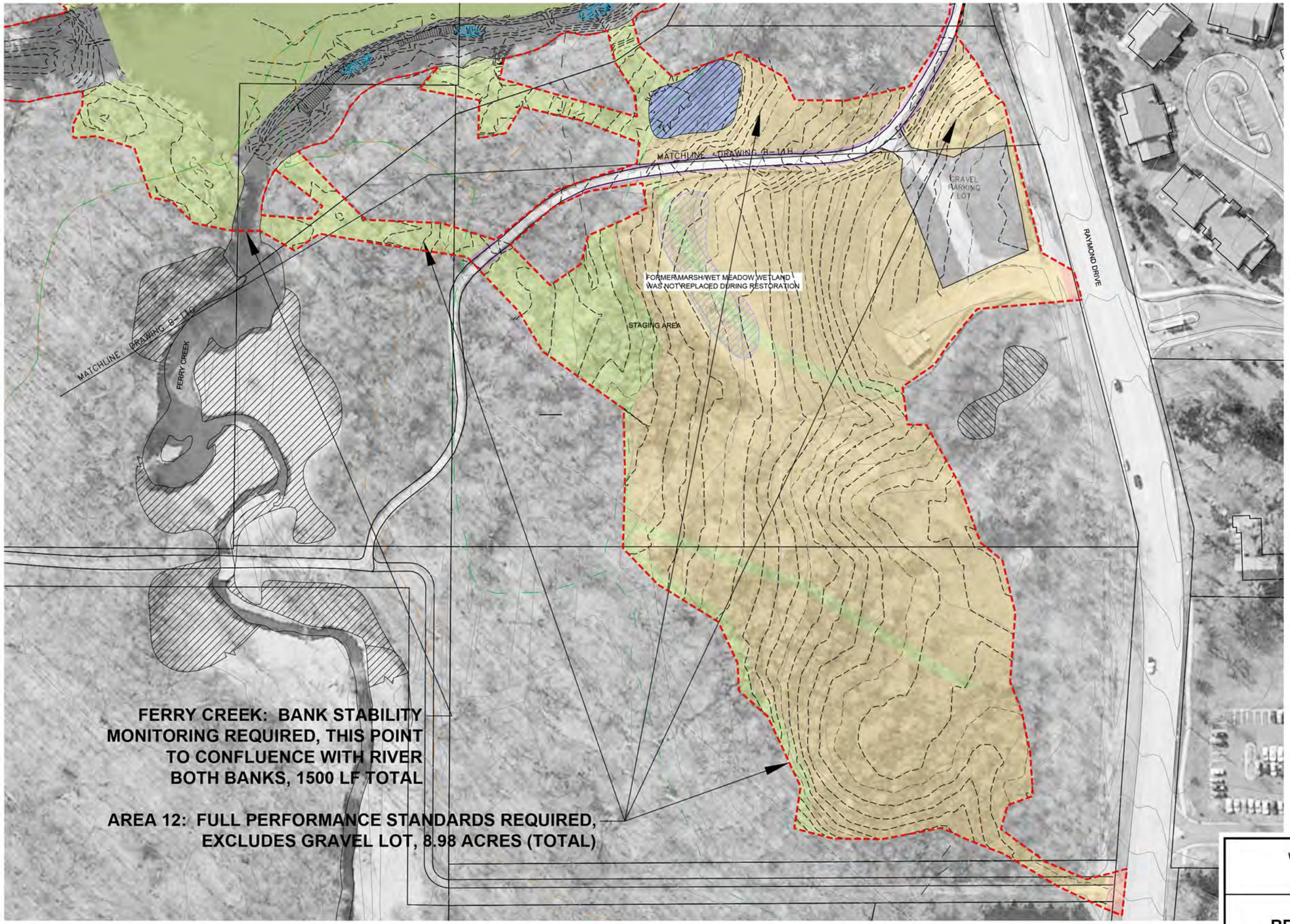
WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE B-11H

EXHIBIT A



LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11I

EXHIBIT A

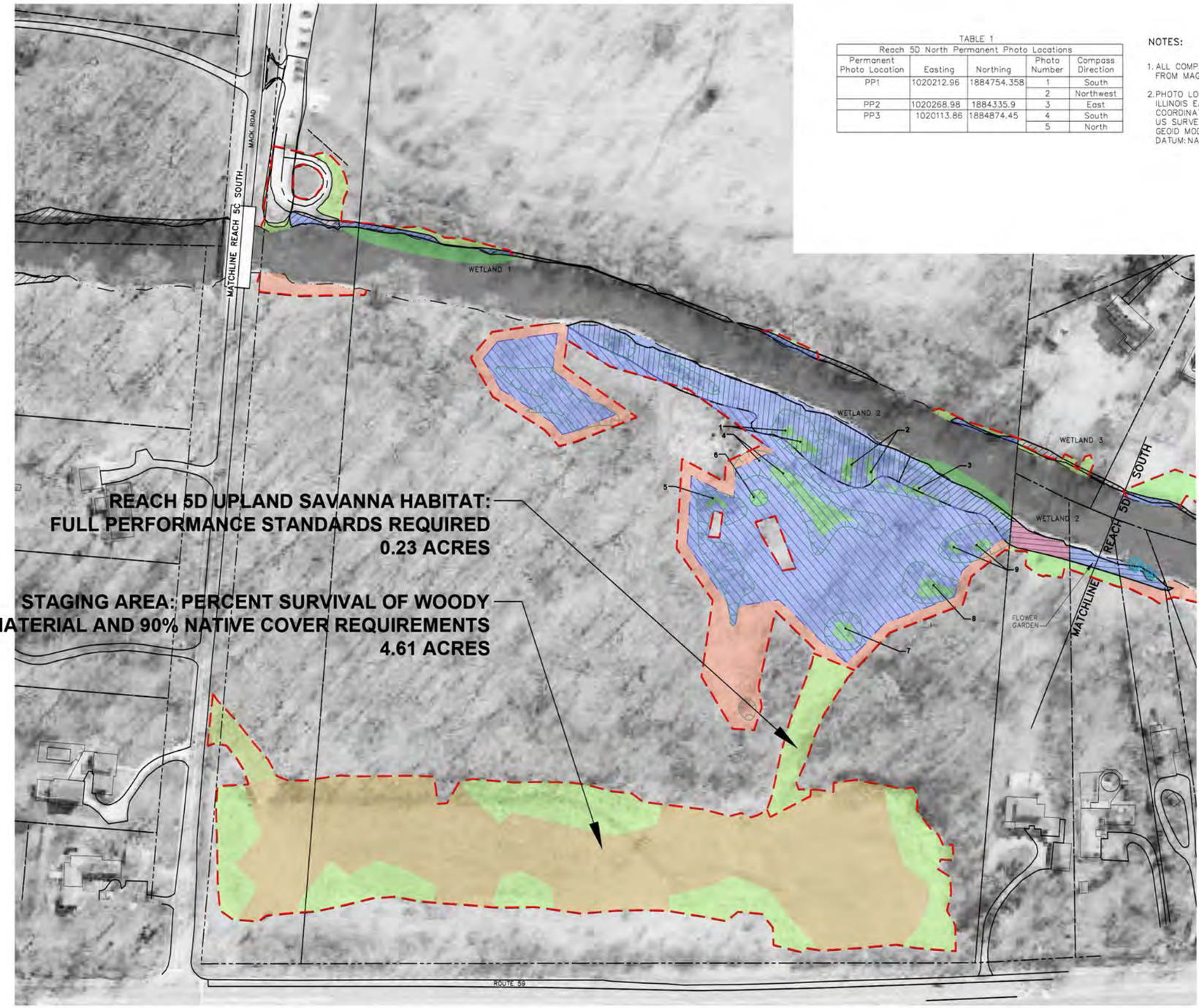


TABLE 1

Reach 5D North Permanent Photo Locations

Permanent Photo Location	Easting	Northing	Photo Number	Compass Direction
PP1	1020212.96	1884754.358	1	South
			2	Northwest
PP2	1020268.98	1884335.9	3	East
PP3	1020113.86	1884874.45	4	South
			5	North

NOTES:

1. ALL COMPASS DIRECTIONS ARE FROM MAGNETIC NORTH.
2. PHOTO LOCATIONS ARE IN THE ILLINOIS EAST STATE PLANE COORDINATE SYSTEM IN UNITS OF US SURVEY FEET. GEOID MODEL: GEOID 96 (CONUS) DATUM: NAD 83

LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- PROPERTY LINE
- APPROXIMATE EDGE OF WATER
- POOL
- RIFFLE
- 8 HOLLOW
- WETLAND BOUNDARY
- WET MEADOW WETLAND
- FORESTED WETLAND
- MITIGATION WETLAND
- RESTORED UPLAND SAVANNA
- RESTORED UPLAND SAVANNA AND FERMI LABS SEED
- RESTORED FERMI LABS SEED
- RESTORED WETLAND
- AREA RESTORED WITH PLANT PLUGS
- RESTORED SHADY FLOODPLAIN
- RESTORED LAWN
- RESTORED BENTGRASS

NOTE:

1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. (NOW KNOWN AS CARLSON PSI) FOLLOWING COMPLETION OF RESTORATION.

0 80' 160'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12C, TRACER NO. B0071024/0000/00035/REACH5D/71024G15.DWG, DATED 3/27/09. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

MACK ROAD MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
12-6

EXHIBIT A

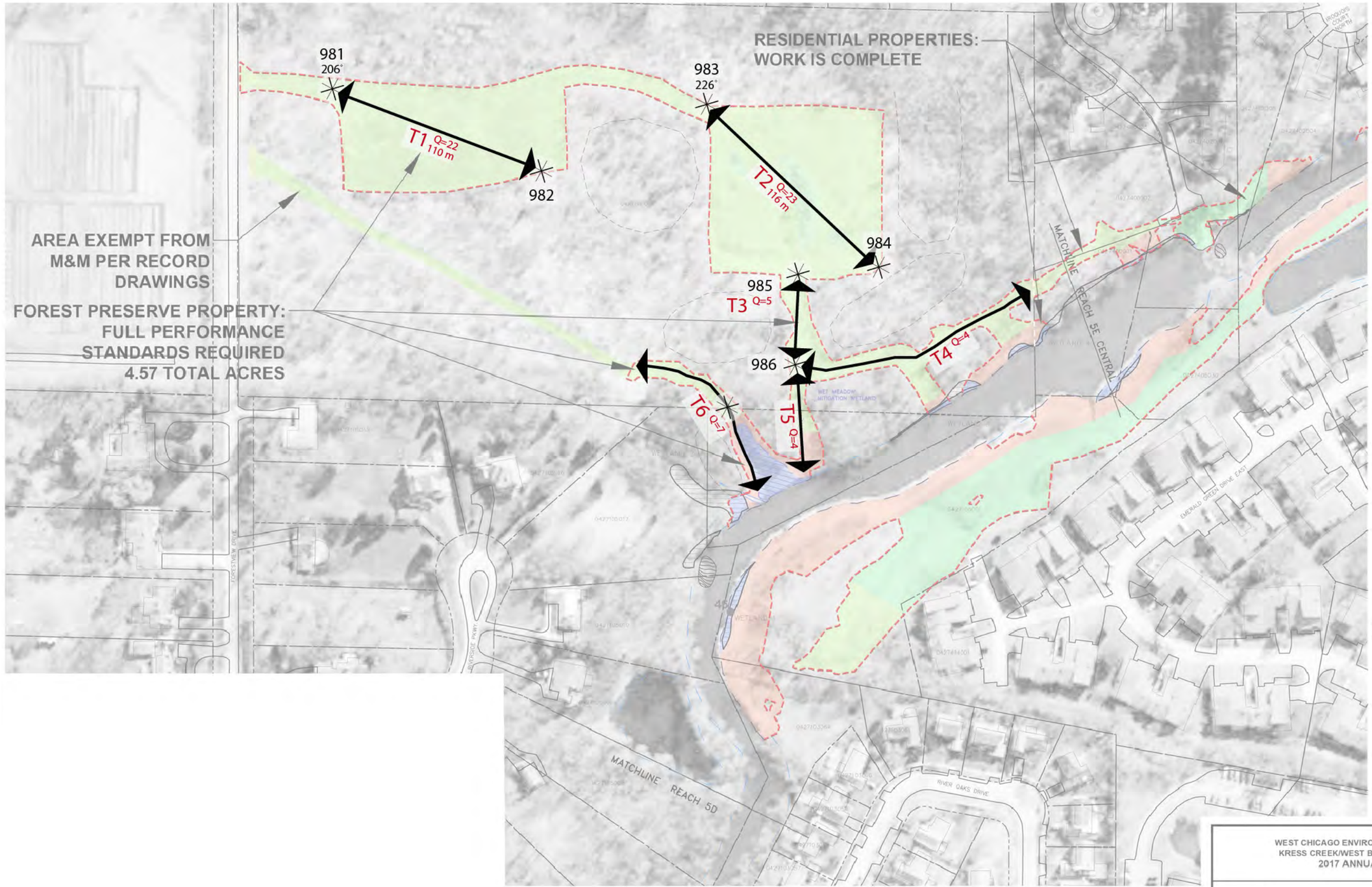
2017 Annual Monitoring Report

Reaches 5D, 5E, 8, and
the Mack Road Staging Area
of the Kress Creek /

West Branch DuPage River Site

Exhibit B

Transect & Quadrat Locations



NOTE:

1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE WERE DEVELOPED BY BLASLAND, BOUCK & LEE FROM SURVEY DATA PROVIDED BY PROSOURCE TECHNOLOGIES, INC. (NOW KNOWN AS CARLSON PSI), DUPAGE COUNTY, AND TRONOX.

0 80' 160'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12A, TRACER NO. B0071030/0000/00026/DWG/71030G10.DWG, DATED 5/21/09. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

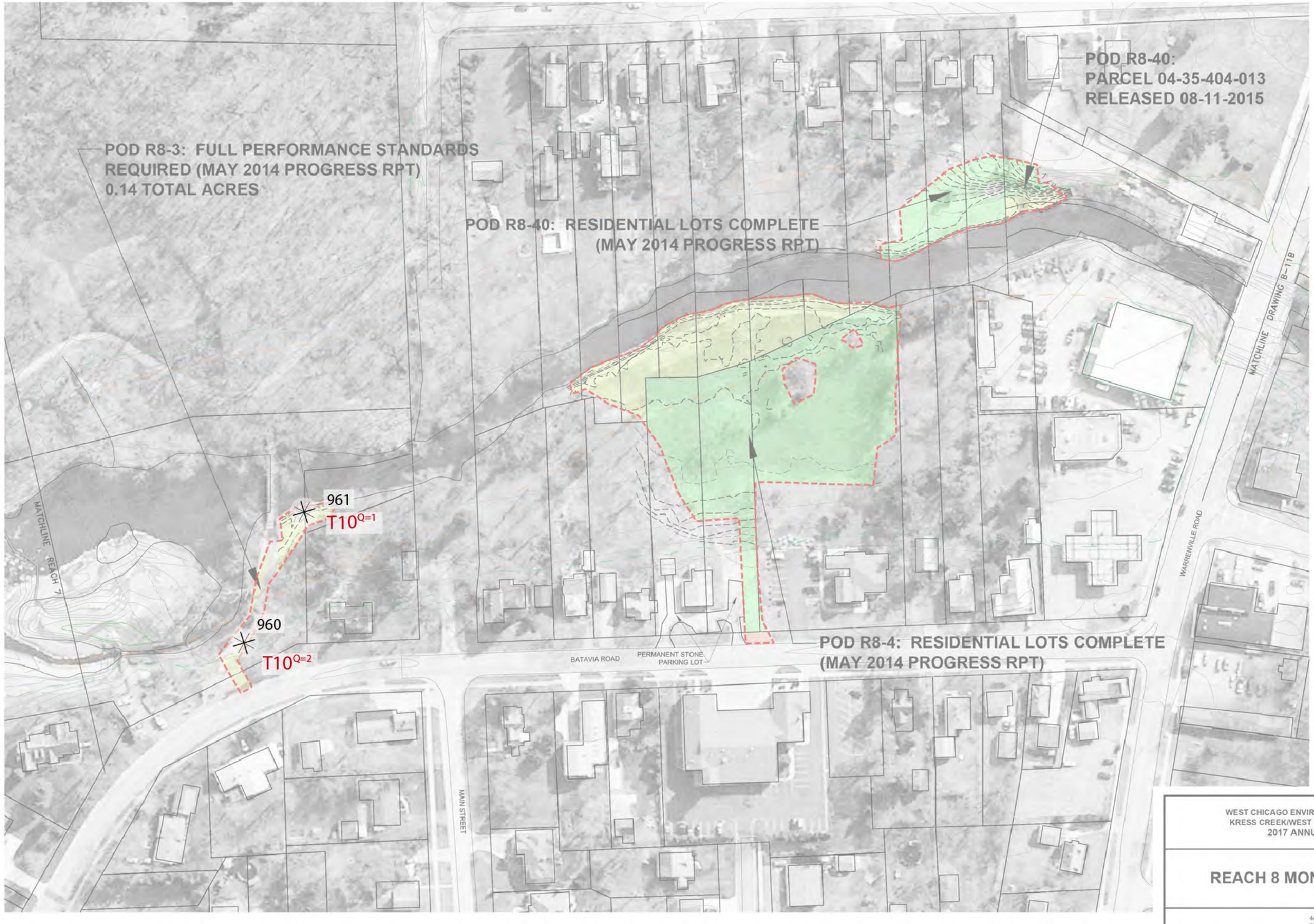
WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 5E MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE 12-1

EXHIBIT B



MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11A

EXHIBIT B

AREA 4: FULL PERFORMANCE STANDARDS REQUIRED, 0.35 ACRES
BANK STABILITY MONITORING REQUIRED, 450 LF

AREA 5: FULL PERFORMANCE
STANDARDS REQUIRED, 0.28 ACRES
BANK STABILITY MONITORING REQUIRED, 700 LF

AREA 3: NO M&M REQUIRED (9/27/13)
WEST BANK RELEASED FROM
BANK STABILITY MONITORING
(8/11/15)

974
975
976
977
978

T11 Q=1
T12 Q=7 67 m
T13 Q=6 60 m

RIVER ROAD
TOWNLINE ROAD
FOREST VIEW AVE. S.
MATCHLINE DRAWING B-11B
MATCHLINE DRAWING B-11D

LEGEND:
- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:
1. BASEMAP PROVIDED BY DUPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

SURVEY POINT
TRANSECT
Q QUADRAT

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

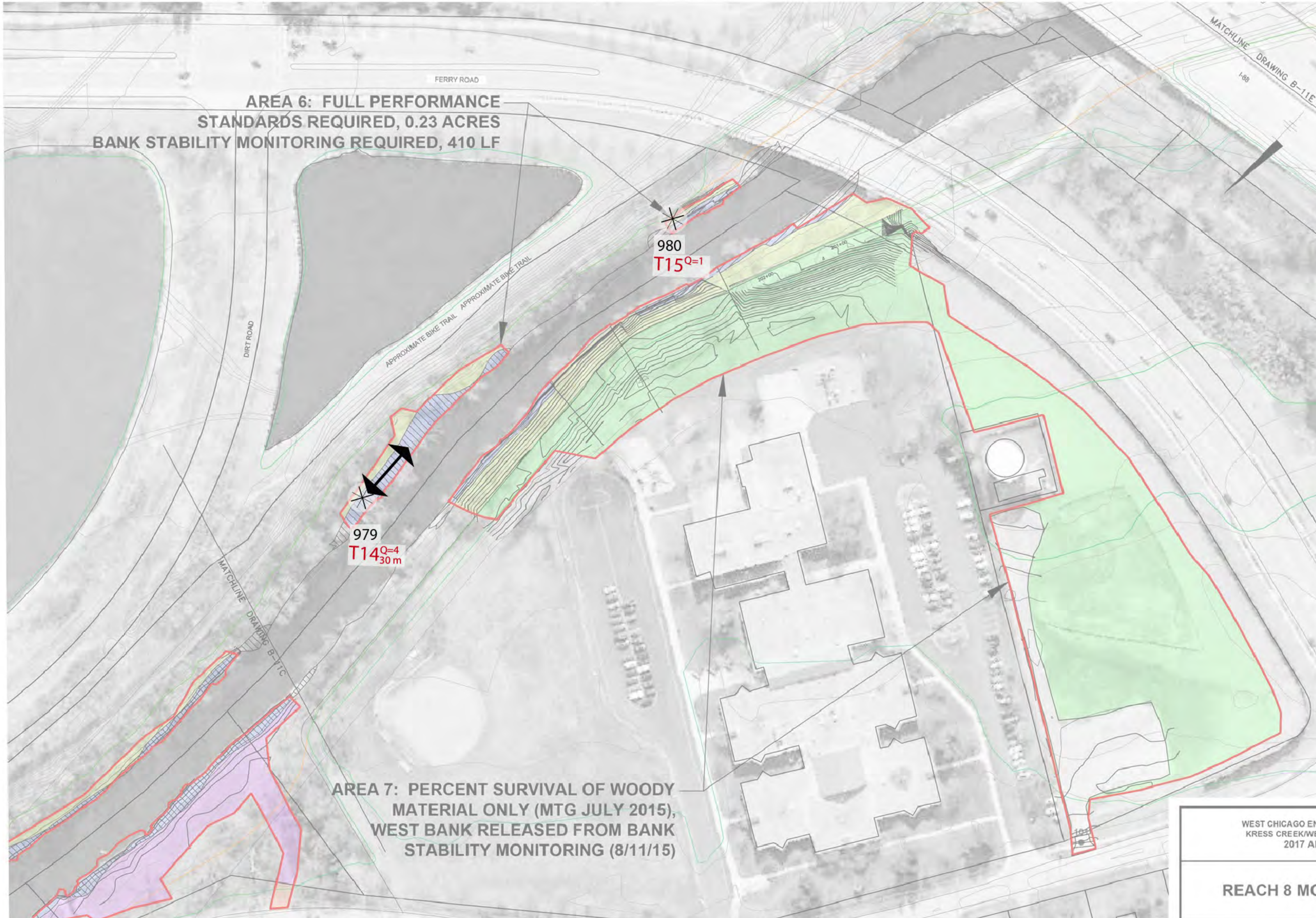
FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11C



LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH LAWN SEED MIX PER TABLE 7 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE B-11D

AREA 10: NO M&M REQUIRED (9/27/13)

AREA 11: FULL PERFORMANCE STANDARDS REQUIRED, 2.86 ACRES BANK STABILITY MONITORING REQUIRED, 680 LF

AREA 9: NO M&M REQUIRED (9/27/13), BANK STABILITY MONITORING REQUIRED, 600 LF

944

943

T2 Q=5 22 m

942

T1 Q=11 214 m

MATCHLINE DRAWING B-11G

RAYMOND DRIVE

MATCHLINE DRAWING B-11I

GRAVEL PARKING LOT

FERRY CREEK: BANK STABILITY MONITORING REQUIRED TO CONFLUENCE WITH RIVER BOTH BANKS, 1500 LF TOTAL

AREA 12: FULL PERFORMANCE STANDARDS REQUIRED (EXCLUDES GRAVEL LOT) 8.98 ACRES (TOTAL)

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE B-11H

952
946
945
344'
948
98'
947
T7 Q=13 102 m
T5 Q=6 45 m
MATCHLINE - DRAWING B-14H
949
352'
953
955
102'
T8 Q=8 62 m
954
951
312'
T6 Q=6 49 m
950
FORMER MARSH/WET MEADOW WETLAND WAS NOT REPLACED DURING RESTORATION
GING AREA
GRAVEL PARKING LOT
RAYMOND DRIVE
MATCHLINE - DRAWING B-14G
FERRY CREEK
T4 Q=31 245 m
T3 Q=35 278 m
957
956

FERRY CREEK: BANK STABILITY MONITORING REQUIRED, THIS POINT TO CONFLUENCE WITH RIVER BOTH BANKS, 1500 LF TOTAL

AREA 12: FULL PERFORMANCE STANDARDS REQUIRED, EXCLUDES GRAVEL LOT, 8.98 ACRES (TOTAL)

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11I

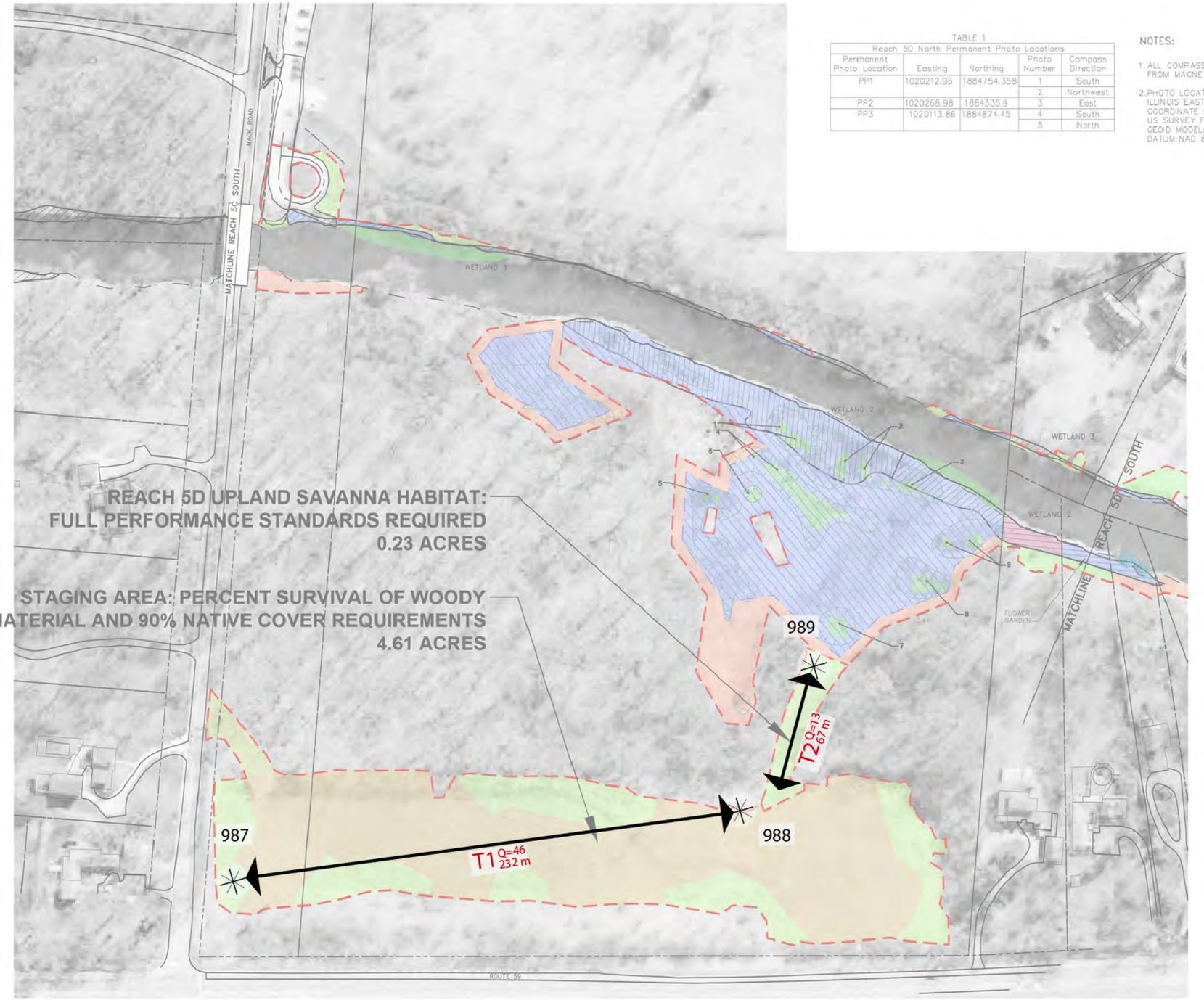


TABLE 1
Reach 5D North Permanent Photo Locations

Permanent Photo Location	Easting	Northing	Photo Number	Compass Direction
PP1	1020212.96	1884754.358	1	South
			2	Northwest
PP2	1020268.98	1884335.9	3	East
PP3	1020113.86	1884874.45	4	South
			5	North

NOTES:

1. ALL COMPASS DIRECTIONS ARE FROM MAGNETIC NORTH.
2. PHOTO LOCATIONS ARE IN THE ILLINOIS EAST STATE PLANE COORDINATE SYSTEM IN UNITS OF US SURVEY FEET. GEOID MODEL: GEOID 96 (CONUS) DATUM: NAD 83

LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- PROPERTY LINE
- APPROXIMATE EDGE OF WATER
- POOL
- RIFFLE
- 8 HOLLOW
- WETLAND BOUNDARY
- WET MEADOW WETLAND
- FORESTED WETLAND
- MITIGATION WETLAND
- RESTORED UPLAND SAVANNA
- RESTORED UPLAND SAVANNA AND FERMI LABS SEED
- RESTORED FERMI LABS SEED
- RESTORED WETLAND
- AREA RESTORED WITH PLANT PLUGS
- RESTORED SHADY FLOODPLAIN
- RESTORED LAWN
- RESTORED BENTGRASS

- SURVEY POINT
- TRANSECT
- Q QUADRAT

NOTE:

1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. (NOW KNOWN AS CARLSON PSI) FOLLOWING COMPLETION OF RESTORATION.

0 80' 160'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12C, TRACER NO. B0071024/0000/00035/REACH5D/71024G15.DWG, DATED 3/27/09. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

MACK ROAD MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE 12-6

EXHIBIT B

2017 Annual Monitoring Report

Reaches 5D, 8, and
the Mack Road Staging Area
of the Kress Creek /

West Branch DuPage River Site

Exhibit C

Tree & Shrub
Survival Diagrams

AT - (1) Dead 2015

SC - All Dead
(1) 2016
(2) 2017

SC - (2) 2015

CS
1 Missing 2015

CS - (2) Dead 2015

COC - (1) Mising 2015

BN - (1) Dead 2015
(2) Dead 2017

AF - 2 Dead from
Stabilization Project

SC - (2) Dead 2017

CS - (1) Missing 2015

CM - (2) Dead 2015

SC - (2) Dead 2015
(1) Dead 2017

Relocated 2015

CM - (1) Dead 2016

RA - All Dead 2015

MATCHLINE DRAWING B-11I

LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- QM TREE REMOVED FROM MONITORING - 2016
- PA SHRUB REMOVED FROM MONITORING - 2016
- ACCEPTABLE CONDITION
- PLANT DEAD
- ORIGINAL PLANT DEAD, REGROWING FROM ROOT
- TREE LEADER DEAD, LOWER PORTION ALIVE
- PLANT MISSING WITHIN ORIGINAL STAKES OR CANNOT BE LOCATED
- PLANT DEAD FROM BEAVER DAMAGE MONITORING NOT REQUIRED
- BRIDGE CONSTRUCTION - REMOVE FROM WCERT MANAGEMENT

NOTE:

1. TREE AND SHRUB FIELD ASSESSMENT PERFORMED BY SMITHGROUPJJR ON SEPTEMBER 6-7, 2017.

0 40' 80'
GRAPHIC SCALE

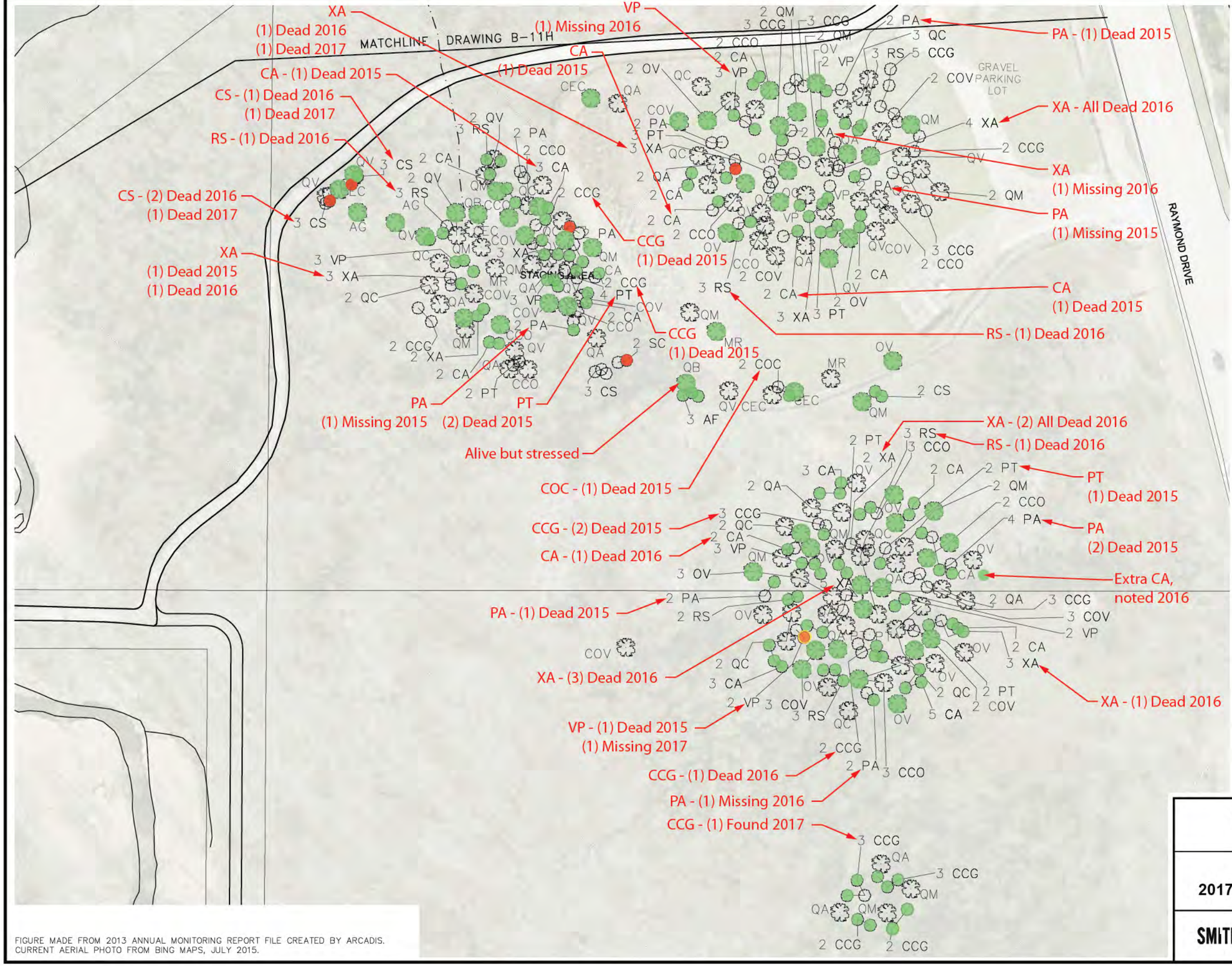
FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8
2017 TREE AND SHRUB MONITORING

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11H T



LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- QM — TREE REMOVED FROM MONITORING - 2016
- PA — SHRUB REMOVED FROM MONITORING - 2016
- ACCEPTABLE CONDITION
- PLANT DEAD
- ORIGINAL PLANT DEAD, REGROWING FROM ROOT
- TREE LEADER DEAD, LOWER PORTION ALIVE
- PLANT MISSING WITHIN ORIGINAL STAKES OR CANNOT BE LOCATED

NOTE:

1. TREE AND SHRUB FIELD ASSESSMENT PERFORMED BY SMITHGROUPJJR ON SEPTEMBER 6-7, 2017.

0 40' 80'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

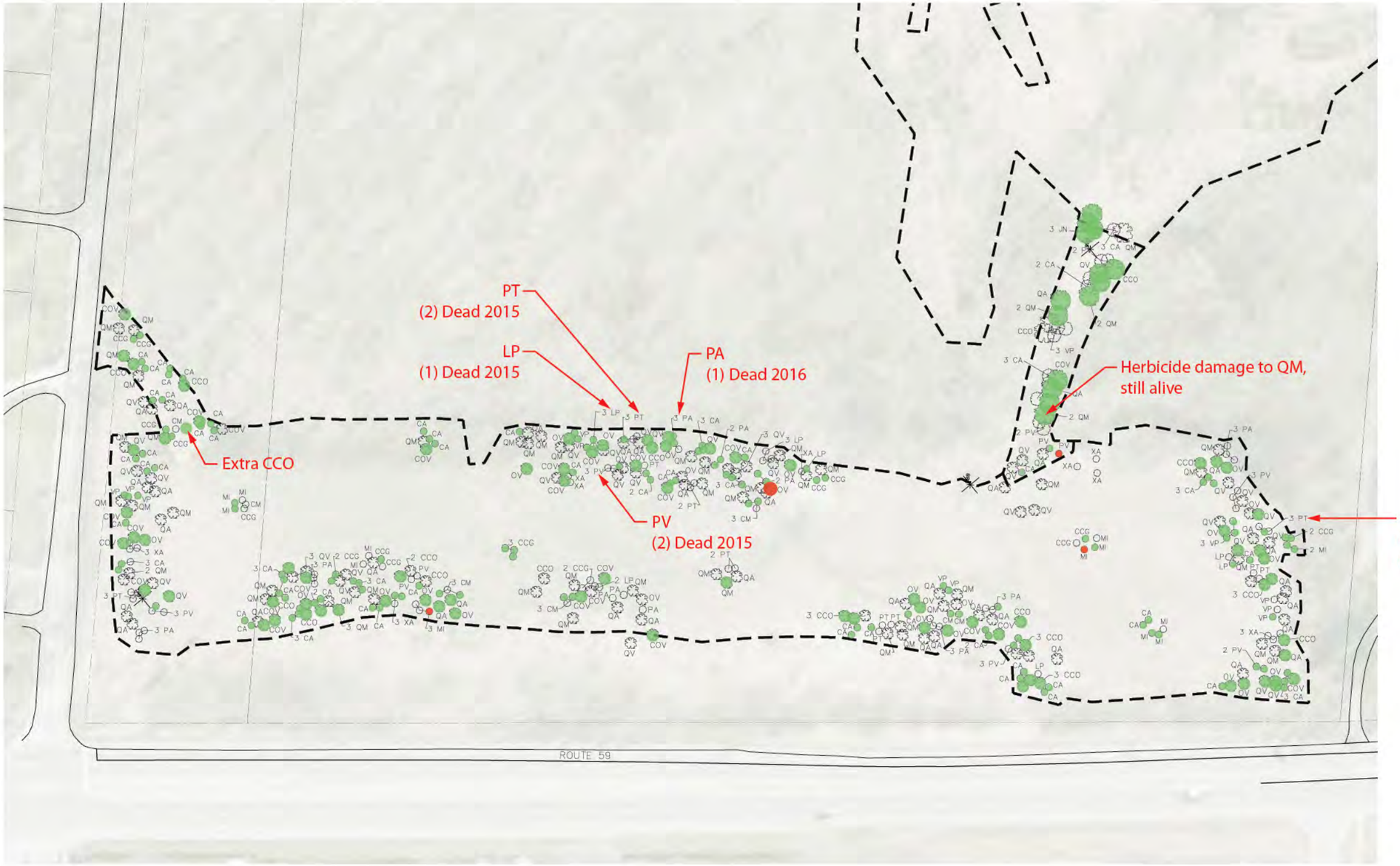
WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8
2017 TREE AND SHRUB MONITORING

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11I T

EXHIBIT C



LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- PROPERTY LINE
- QM — TREE REMOVED FROM MONITORING 2016
- PA — SHRUB REMOVED FROM MONITORING 2016
- ACCEPTABLE CONDITION
- PLANT DEAD
- ORIGINAL PLANT DEAD, REGROWING FROM ROOT
- TREE LEADER DEAD, LOWER PORTION ALIVE
- PLANT MISSING WITHIN ORIGINAL STAKES OR CANNOT BE LOCATED

NOTE:

1. TREE AND SHRUB FIELD ASSESSMENT PERFORMED BY SMITHGROUPJJR ON SEPTEMBER 6-7, 2017.

0 50' 100'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12C, TRACER NO. B0071024/0000/00035/REACH5D/71024G15.DWG, DATED 3/27/09. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

MACK ROAD STAGING AREA
2017 TREE AND SHRUB MONITORING

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
12-6 T

EXHIBIT C

2017 Annual Monitoring Report

Reaches 5D, 5E, 7, 8, and the Mack Road Staging Area of the Kress Creek / West Branch DuPage River Site

Appendix A

Maintenance and Management Field Reports

Revised 2017 management recommendations for WCERT

From: Bill Stoll (AES)
To: Deepak Bhojwani (Weston Solutions)
Cc: Jess Fink (JJR), Mark O'Leary (EAS), Cecily Cunz (AES), and Mike Polito (Tallgrass)
Date: 4/25/17

Below are the management recommendations for Reach 8B and Mack Road from the 2016 Annual Monitoring Report for WCERT. Because we were unable to burn this spring, Mike Polito and I visited the site on 4/20/17 to reassess and adjust our management strategy as needed. Revisions are in red.

Reach 8B

Performance: Reach 8B met or exceeded three out of six performance standards. The ground cover was 94%, the three most dominant species were native, and the Native Mean C and FQI increased in 2016. However, the native Mean C was 3.12, invasive weed composed 21.0% of the herbaceous ground cover, and patches of bare ground exceeded 0.5 square meters.

Recommendations: Area 11 – T1 (North of drive)

- ~~Mow, conduct a prescribed burn,~~ Spot herbicide invasive species very soon (by next week) and then seed with the Open Floodplain Mix and native grasses (e.g. *Elymus virginicus*) during ~~the~~ early spring.
- Cut and herbicide silver maple and black locust seedlings and saplings.

Recommendations: Area 11 – T2 (South of drive)

- Herbicide and eradicate honeysuckle and purple loosestrife. Reduce Canada goldenrod by 75% using herbicide and mowing.
- Herbicide and reseed (with Open Floodplain mix) mowed access area during spring.
- Inform FPDDC that area is part of WCERT and should not be used. *Weston, AES, or JJR should contact them.*

Recommendations: Area 12 – T3 & T4

- Remove screenings and spoil piles in SW corner of Area 12, NW of trail (See Photos 1 & 2).
- Spot herbicide cool season grasses (e.g. Kentucky bluegrass, Hungarian brome, and tall fescue, reed canary grass) and *Phragmites* and clover and sweet clover early next spring, especially in the swales and east of T4.
- Reseed killed off areas during spring with Upland Prairie m ix.
- Manage Canada goldenrod on north end:
    - ~~Mow and burn during spring 2017.~~
    - Herbicide Canada goldenrod basal rosettes during early spring ~~after burn~~.
    - Reseed killed off areas during spring with specified seed mixture.
    - Mow/cut Canada goldenrod late summer 2017 (i.e. August) to prevent it from setting seed.

Recommendations: Area 12 – T5 & T7

- Areas are dominated by native species with few invasive species.
- Spot herbicide invasive species as needed during spring and summer 2017.

Recommendations: Area 12 – T6 & T8 – *Area mowed with a brush hog since last fall (See Photos 3 & 4). Need to confirm location w/ GPS and inform FPDPC if they are managing the wrong area.*

- ~~Mow, burn, and reseed with a grass heavy native mix next spring (2017), except where *Elymus virginicus* is already heavy.~~ Spot herbicide at least 2X this season (e.g. woody resprouts, reed canary grass, other weeds) and reexamine at the end of the season.
- ~~Numerous trees and shrubs have been installed in the T6 area and caution should be taken during the prescribed burn not to damage these plants.~~

Mack Road – Staging Area

Performance: Mack Road staging area achieved its performance standard (>90% vegetation cover), but will not receive signoff until Reach 5D-Upland Savanna also meets the same performance standard.

Recommendations:

- ~~Conduct prescribed burn during spring 2017. Precautions need to be taken to avoid damaging installed trees and shrubs.~~ This area was not burned because FPDDPC decided not to burn it (see Section 2.0 of 2016 Annual Report).

Reach 5D Upland Savanna

Performance: Reach 5D-Upland Savanna did not meet the performance standard (>90% vegetation cover).

Recommendations:

- Mow-seeded areas during late spring and mid-summer.
- Spot herbicide weeds as necessary during spring and summer 2017.
- Monitor at end of summer to assess establishment.

Photo 1.

Photo 2.

Photo 3.

Photo 4.

SMITHGROUPJJR

FIELD OBSERVATION REPORT

Project name: Kress Creek / West Branch DuPage River Site
West Chicago Environmental Response Trust (WCERT)

Project number: 20752.002

Locations: 11:45 am Reach 8a: Bower Elementary School
12:45 pm Reach 7: Island Planting Areas

Date: May 8, 2017
Issue date: May 15, 2017

Participants: Jessie Fink, SmithGroupJJR
Mike Polito, Tallgrass Restoration
Sarah Gillespie, WCERT
Bower Elem: Colin Wilkie, School District Facilities Representative
Angela Levernier, DuPage County
Reach 7: Nick Fuller, Forest Preserve District of DuPage County
Jessi DeMartini, Forest Preserve District of DuPage County

Weather: Sunny, temperature in 60's

Distribution to Participants and Agencies:
Jamie Lock / Jenna Fahey, Local Communities (For School District and FPDDC)
Deepak Bhojwani, WCERT
Mark O'Leary / Cecily Cunz / Bill Stoll, Applied Ecological Services

Notes:

Bower Elementary
Replacement trees and shrubs were installed at Bower Elementary School on May 14, 2016. This visit was to review the plant material for the one-year warranty condition assessment. Jessie Fink met with Colin Wilkie, Angela Levenier, Mike Polito and Sarah Gillespie to review the site. Mr. Wilkie stated that the school was generally very pleased with condition of the plant material.

On review, it was noted that one Linden tree had trunk damage. This tree was located in the playground area and the bark was likely scratched off by the children, which would not be a warranty item. The tree that had previously been noted on the initial plant review as having scuffed bark was healing and the wound had almost completely closed in a year's time. The group decided that no replacement plantings would be required. The only punchlist item required for Tallgrass Restoration to complete is removal of the staking material from the tree that was leaning after the original installation.

Reach 7
Jessie Fink met with Mike Polito, Sarah Gillespie, Nick Fuller and Jessi DeMartini to conduct the one-year warranty condition assessment for the Reach 7 island plantings. Plants were installed the week of May 23, 2016. Survivability was generally good for the trees and shrubs. Replacements are required for the following, as noted on the attached diagram:

1 Quercus bicolor
5 Salix nigra
4 Viburnum prunifolium
1 Viburnum lentago

As only one tree required replacement on the smaller island, the group decided that it could be planted in an alternate location on the larger island to minimize any damage from construction / planting access. Also, because the 5 willows lost (Salix nigra) were all from beaver damage, the Forest Preserve staff requested that an alternate species be planted to try a species less inviting for damage. Their suggestion was to replace the willows with sycamores (Platanus occidentalis); if that is not possible, their next preference is swamp white oaks (Quercus bicolor). Following the meeting, Tallgrass Restoration called suppliers to see if the material would be available. They were able to locate sycamores only in the 0.75" to 1" size range, instead of the 1.5" size of material originally installed. They would be willing to install twice the number of sycamores in the smaller size if the Forest Preserve would like that species (total of 10 trees). Swamp White Oaks appear to currently be available in a 1.5" size. This replacement strategy requires approval from the Local Communities before the plant material will be procured. Final locations of tree materials will be provided once the species is approved. If the switch is made to a different species, they will be moved further upslope from the water which will also provide additional protection from the beavers.

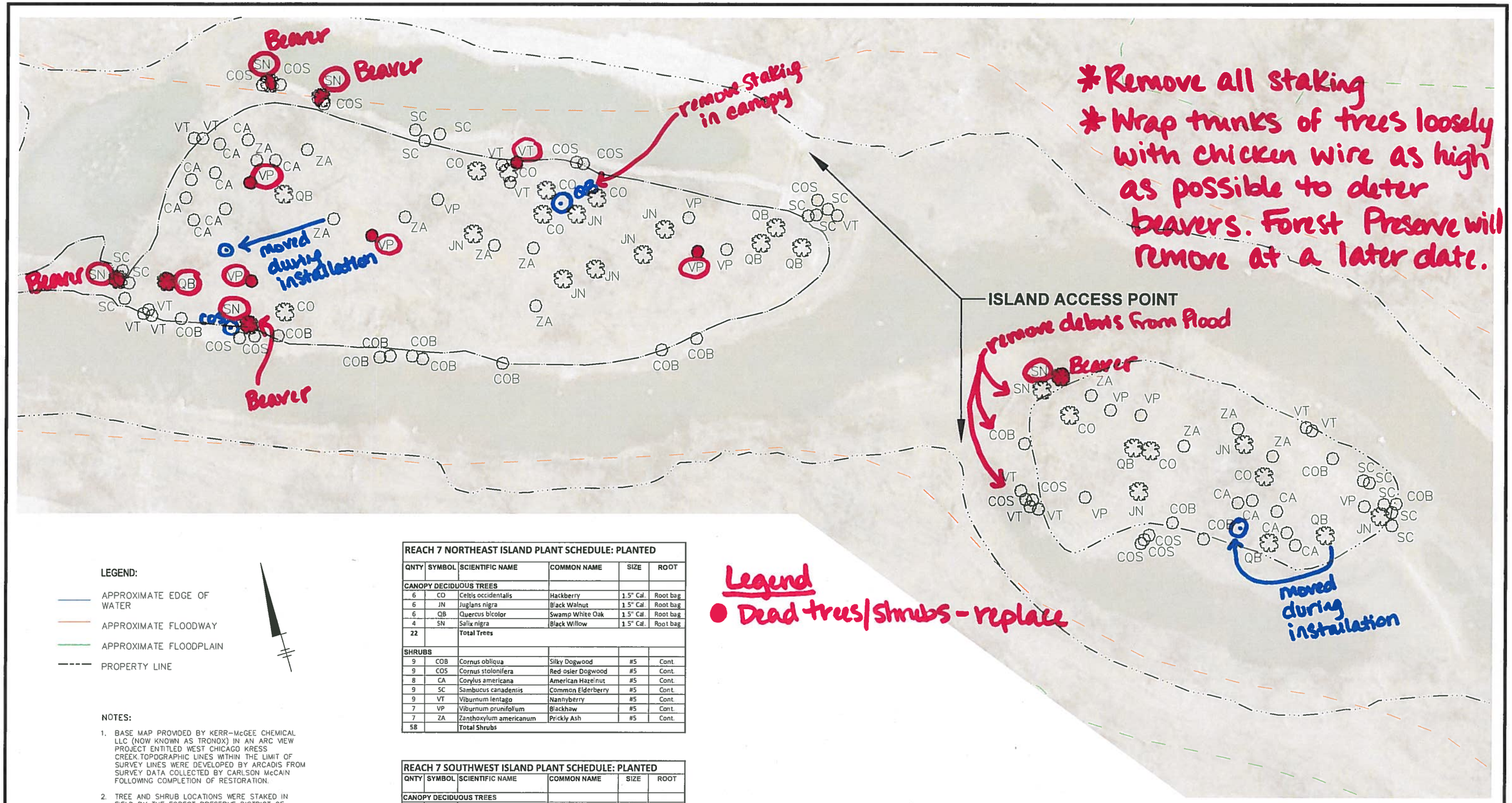
When the warranty replacements are installed, Tallgrass Restoration will also remove the staking and the outer chicken wire fencing from all plants. The Forest Preserve requested that the removed chicken wire be loosely wrapped around the trunks of all trees to provide additional beaver protection. The Forest Preserve will be responsible for removing this protection at a later date when the trees grow larger. All materials shall be removed from the shrubs, with no protection to remain.

Tallgrass stated that the tree and shrub replacement installation will likely be completed with access via foot and a hand cart to minimize disturbance from equipment. This method will be confirmed prior to the installation date. Water levels in the river will be checked prior to plant installation at http://waterdata.usgs.gov/il/nwis/uv?05540095 if rain occurs.

Respectfully submitted,

Jessie Fink, Landscape Architect
SmithGroupJJR

Our summarization of this Field Observation Report is transcribed as above. Please notify the writer within five (5) business days of this transcription of any disagreement as the foregoing becomes part of the project record and is the basis upon which we will proceed.



* Remove all staking
* Wrap trunks of trees loosely with chicken wire as high as possible to deter beavers. Forest Preserve will remove at a later date.

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE

NOTES:

1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK.TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY CARLSON McCAIN FOLLOWING COMPLETION OF RESTORATION.
2. TREE AND SHRUB LOCATIONS WERE STAKED IN FIELD BY THE FOREST PRESERVE DISTRICT OF DUPAGE COUNTY. LOCATIONS WERE LOCATED WITH A HANDHELD GPS BY SMITHGROUPJJR STAFF ON MAY 17, 2016.

REACH 7 NORTHEAST ISLAND PLANT SCHEDULE: PLANTED

QNTY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT
CANOPY DECIDUOUS TREES					
6	CO	Celtis occidentalis	Hackberry	1.5" Cal.	Root bag
6	JN	Juglans nigra	Black Walnut	1.5" Cal.	Root bag
6	QB	Quercus bicolor	Swamp White Oak	1.5" Cal.	Root bag
4	SN	Salix nigra	Black Willow	1.5" Cal.	Root bag
22		Total Trees			
SHRUBS					
9	COB	Cornus obliqua	Silky Dogwood	#5	Cont.
9	COS	Cornus stolonifera	Red-osier Dogwood	#5	Cont.
8	CA	Corylus americana	American Hazelnut	#5	Cont.
9	SC	Sambucus canadensis	Common Elderberry	#5	Cont.
9	VT	Viburnum lentago	Nannyberry	#5	Cont.
7	VP	Viburnum prunifolium	Blackhaw	#5	Cont.
7	ZA	Zanthoxylum americanum	Prickly Ash	#5	Cont.
58		Total Shrubs			

REACH 7 SOUTHWEST ISLAND PLANT SCHEDULE: PLANTED

QNTY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT
CANOPY DECIDUOUS TREES					
3	CO	Celtis occidentalis	Hackberry	1.5" Cal.	Root bag
3	JN	Juglans nigra	Black Walnut	1.5" Cal.	Root bag
3	QB	Quercus bicolor	Swamp White Oak	1.5" Cal.	Root bag
2	SN	Salix nigra	Black Willow	1.5" Cal.	Root bag
11		Total Trees			
SHRUBS					
5	COB	Cornus obliqua	Silky Dogwood	#5	Cont.
5	COS	Cornus stolonifera	Red-osier Dogwood	#5	Cont.
5	CA	Corylus americana	American Hazelnut	#5	Cont.
5	SC	Sambucus canadensis	Common Elderberry	#5	Cont.
5	VT	Viburnum lentago	Nannyberry	#5	Cont.
4	VP	Viburnum prunifolium	Blackhaw	#5	Cont.
4	ZA	Zanthoxylum americanum	Prickly Ash	#5	Cont.
33		Total Shrubs			

Legend

- Dead trees/shrubs - replace

Notes from warranty assessment 5/8/2017

0 40' 80'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2016 ANNUAL MONITORING

REACH 7 REMEDIAL VEGETATION RESTORATION PLAN

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
7-TREE

WCERT Native Vegetation Management Inspection Report

To:	Jessie Fink (SmithGroupJJR), Mike Polito (Tallgrass Restoration), Deepak Bhojwani (WCERT), Mark O'Leary (AES), and Cecily Cunz (AES)
From:	Bill Stoll (AES)
Project Name:	Kress Creek / West Branch DuPage River
Project Client:	West Chicago Environmental Response Trust (WCERT)
AES Project #:	17-0111
Date:	June 1, 2017

On May 23, Mike Polito of Tallgrass Restoration (Tallgrass) and I inspected all WCERT sites that Tallgrass is managing this season. Below is a brief description of past management activities and those planned for this spring at each site.

Reach 5D (Mack Road)
Site: 0.23 acres savanna restoration
Previous Management: Site was herbicided and re-seeded last year.
Condition: Vegetation cover has improved and is now 70%-80%
Planned Management: Tallgrass will mow and spot herbicide clover, sweet clover, and Dame's rocket. *This was completed on Wednesday 5/24.*

Reach 5E
Site: 4.3 acres mostly savanna restoration with some wetland and floodplain restoration
Previous Management: Savanna areas were broadcast herbicided and wetland and floodplain areas were spot herbicided twice last season, and then burned and drill seeded in the fall. (See Photos 4-6) T6 area was herbicided and seeded but not burned. Some project areas between T4 and river have not been brushed, burned, or seeded.
Planned Management: Mow and spot herbicide clover, sweet clover, and ragweed in savanna areas and reed canary grass and giant ragweed along the river. Remove brush (e.g. box elder, buckthorn, cherry, elms, and multiflora rose) in areas between T4 and river. Then spot herbicide and reseed these areas.

Note: AES will provide Tallgrass GPS files of boundaries of this reach so they can determine the precise boundary of unit.

Reach 8 Pod R8-3
Site: 0.14 acres woodland and river bank management.
Previous Management: Site was burned during April 2016. Garlic mustard (GM) and honeysuckle was pulled or cut and herbicided in the woods, and reed canary grass and other weeds were spot-herbicided or cut along the river.
Planned Management: Tallgrass will pull or spot herbicide GM and cut and treat honeysuckle and box elder in the woods within 20' of path and will spot herbicide RCG and giant ragweed along the river. *This was completed on Wednesday 5/24 with the exception of removing one large honeysuckle.*

Reach 8 Area 4
Site: 0.35 acres wetland and floodplain restoration.
Previous Management: Site was killed off with herbicide in 2016 and was burned and re-seeded during fall. Site was spot herbicided this spring. (See Photo 3)
Planned Management: Tallgrass will herbicide again this spring targeting GM, creeping Charlie and RCG. *This was completed on Wednesday 5/24.*

Reach 8 Area 5
Site: 0.28 acres wetland and floodplain restoration
Previous Treatment: Site was burned during April 2016 and over-seeded during June followed by spot-herbiciding of invasive species including reed canary grass, Canada thistle, and *Phragmites*.
Planned Management: Tallgrass will spot herbicide RCG, moneywort, and giant ragweed this spring. *This was completed on Wednesday 5/24.*

Reach 8 Area 6
Site: 0.23 acres wetland and floodplain restoration
Previous Treatment: Site was burned during April 2016 and over-seeded during June. Invasive species, including reed canary grass, Canada thistle, teasel, purple loosestrife, cattail, and *Phragmites* were spot herbicided or hand-wicked after the seeding. RCG was spot herbicided this spring.
Planned Management: Tallgrass will spot herbicide RCG, PL, ragweed, and check *Phragmites* this spring.

Reach 8 Area 11
Site: 0.5 acres floodplain management
Previous Treatment: The area was burned in early April 2016, and invasive species, including RCG and PL, were spot herbicided several times during the season, and others were mowed in August. RCG and thistle were spot herbicided this spring, and planted trees without trunk protection were wrapped with chicken wire.
Planned Management: Tallgrass will spot herbicide RCG, ragweed, and creeping Charlie on both sides of the drive and Canada goldenrod on the south side.

Reach 8 Area 12
Site: 8.98 acres of mostly prairie and some wetland and floodplain restoration
Previous Treatment: The area was burned in early April 2016 and overseeded in early June. Clover, sweet clover, thistle and crown vetch were spot herbicided before the seeding. The site was spot herbicide several more times after the seeding and targeted the same species plus RCG, *Phragmites*, bluegrass, and others species. In addition, the site was spot mowed several times targeting annual and biennial weeds (e.g. Queen Anne's lace and ragweed) and cottonwood resprouts.
Planned Management: Tallgrass will: 1) remove screenings and spread over parking lot and spread stockpiled soil over screening removal area, and 2) spot herbicide invasive species, such as clover, sweet clover, thistle, and Canada goldenrod. *#2 was completed on Tuesday 5/30.*

Note that the site boundaries of the T5-T8 areas were staked by Tallgrass (see Photos 1 & 2) to allow their crews to locate the project areas.

Sincerely,

William W. Stoll
Senior Ecologist / Regional Manager
Applied Ecological Services
120 West Main St.
West Dundee, IL 60118
Office: 847-844-9385
Cell: 773-507-0983
bill@appliedeco.com

Photos

Photo 1. Reach 8 – Area 12, Transect 8. Looking east.

Photo 4. Reach 5E, Transect 1 area. Looking south.

Photo 2. Reach 8 – Area 12, Transect 6. Looking northwest

Photo 5. Reach 5E, Transect 2 area. Looking southwest.

Photo 3. Reach 8 Area 4. Looking south.

Photo 6. Reach 5E, Transect 4 area. Looking southwest toward river.

SMITHGROUPJJR

FIELD OBSERVATION REPORT

Project name: Kress Creek / West Branch DuPage River Site
West Chicago Environmental Response Trust (WCERT)

Project number: 20752.002

Location: Reach 7: Island Planting Areas

Date: July 19, 2017
Issue date: July 20, 2017

Participants: Jessie Fink, SmithGroupJJR
Connor Nett, SmithGroupJJR

Weather: Sunny, temperature in 80's

Distribution:
Mike Polito, Tallgrass Restoration
Deepak Bhojwani, WCERT
Mark O'Leary / Cecily Cunz / Bill Stoll, Applied Ecological Services

Notes:

This visit was conducted to verify warranty replacements and staking removal for the Reach 7 islands. Per the warranty assessment meeting with Forest Preserve staff in May 2017, Tallgrass Restoration provided the following replacements:

1 Quercus bicolor (1.5" caliper)
5 Salix nigra replaced instead with 10 Platanus occidentalis (0.75" to 1" caliper)
4 Viburnum prunifolium
1 Viburnum lentago

Tallgrass completed the replacements on June 28, 2017, and removed the staking and the outer chicken wire fencing from all plants. The trunks of all trees were wrapped loosely with chicken wire to provide additional beaver protection. The Forest Preserve will be responsible for removing this protection at a later date when the trees grow larger.

The verification visit found that Tallgrass completed all replacements as required. A few of the trees showed signs of transplant shock; however, these were all re-budding out with new growth and are considered to be in acceptable condition. Watering buckets were still in place for the planted materials. Also, the water crossing for island access was noted to be in good condition with no observed damage.

The majority of the staking and chicken wire protection was removed as required. A few areas of staking were missed by the crew as noted on the attached diagram. This includes the following locations:

- South island, one Quercus bicolor and the adjacent Corylus americana
- South island, one Sambucus canadensis (plant located next to large boulder)

- North island, SGJJR staff removed one long metal nursery stake from a Quercus bicolor. This was placed next to the watering buckets from the tree planting at the north end of the island for Tallgrass to remove when they retrieve their buckets.

Tallgrass needs to return to the site to remove this staking material. We request that photos be provided to document that this work is complete.

Three Platanus occidentalis planted at south end of island with watering buckets

Example of replacement Viburnum shrub

Water crossing to island

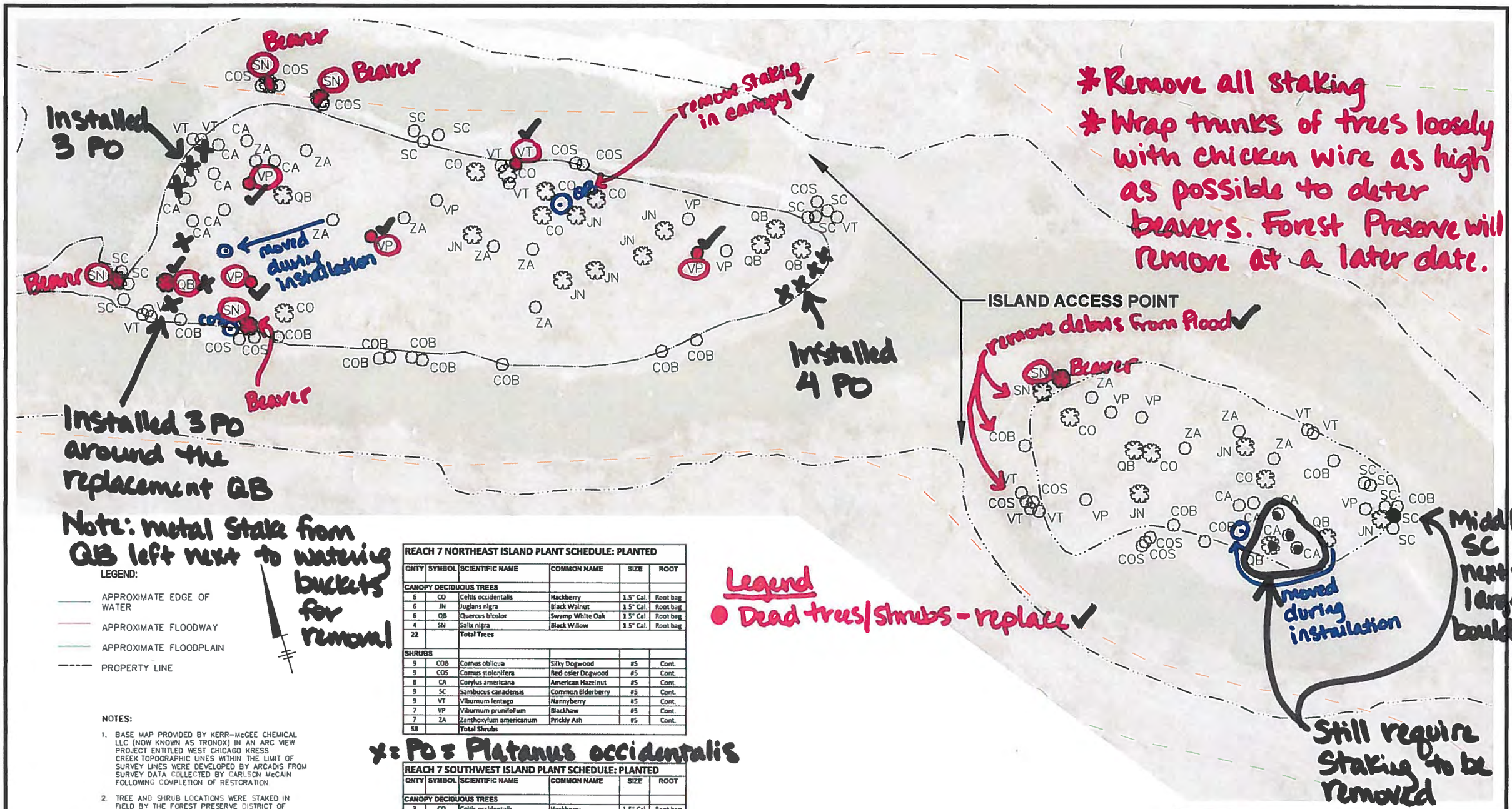
Quercus on south island needs stakes removed

Metal stake left next to watering bucket

Respectfully submitted,

Jessie Fink, Landscape Architect
SmithGroupJJR

Our summarization of this Field Observation Report is transcribed as above. Please notify the writer within five (5) business days of this transcription of any disagreement as the foregoing becomes part of the project record and is the basis upon which we will proceed.



*Remove all staking
*Wrap trunks of trees loosely with chicken wire as high as possible to deter beavers. Forest Preserve will remove at a later date.

Note: metal stake from QB left next to watering buckets for removal

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE

NOTES:

1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY CARLSON McCAIN FOLLOWING COMPLETION OF RESTORATION.
2. TREE AND SHRUB LOCATIONS WERE STAKED IN FIELD BY THE FOREST PRESERVE DISTRICT OF DUPAGE COUNTY. LOCATIONS WERE LOCATED WITH A HANDHELD GPS BY SMITHGROUPJJR STAFF ON MAY 17, 2016.

REACH 7 NORTHEAST ISLAND PLANT SCHEDULE: PLANTED

QNTY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT
CANOPY DECIDUOUS TREES					
6	CO	Celtis occidentalis	Hackberry	1.5" Cal.	Root bag
6	JN	Juglans nigra	Black Walnut	1.5" Cal.	Root bag
6	QB	Quercus bicolor	Swamp White Oak	1.5" Cal.	Root bag
4	SN	Salix nigra	Black Willow	1.5" Cal.	Root bag
22		Total Trees			
SHRUBS					
9	COB	Cornus obliqua	Silky Dogwood	#5	Cont.
9	COS	Cornus stolonifera	Red osier Dogwood	#5	Cont.
8	CA	Corylus americana	American Hazelnut	#5	Cont.
9	SC	Sambucus canadensis	Common Elderberry	#5	Cont.
9	VT	Viburnum lentago	Nannyberry	#5	Cont.
7	VP	Viburnum prunifolium	Blackhaw	#5	Cont.
7	ZA	Zanthoxylum americanum	Prickly Ash	#5	Cont.
58		Total Shrubs			

x = PO = Platanus occidentalis

REACH 7 SOUTHWEST ISLAND PLANT SCHEDULE: PLANTED

QNTY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT
CANOPY DECIDUOUS TREES					
3	CO	Celtis occidentalis	Hackberry	1.5" Cal.	Root bag
3	JN	Juglans nigra	Black Walnut	1.5" Cal.	Root bag
3	QB	Quercus bicolor	Swamp White Oak	1.5" Cal.	Root bag
2	SN	Salix nigra	Black Willow	1.5" Cal.	Root bag
11		Total Trees			
SHRUBS					
5	COB	Cornus obliqua	Silky Dogwood	#5	Cont.
5	COS	Cornus stolonifera	Red osier Dogwood	#5	Cont.
5	CA	Corylus americana	American Hazelnut	#5	Cont.
5	SC	Sambucus canadensis	Common Elderberry	#5	Cont.
5	VT	Viburnum lentago	Nannyberry	#5	Cont.
4	VP	Viburnum prunifolium	Blackhaw	#5	Cont.
4	ZA	Zanthoxylum americanum	Prickly Ash	#5	Cont.
33		Total Shrubs			

Legend
● Dead trees/shrubs - replace ✓

Notes from warranty assessment
5/8/2017
Verification visit notes
7/20/2017

0 40' 80' GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2016 ANNUAL MONITORING

REACH 7 REMEDIAL VEGETATION RESTORATION PLAN

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608 251.1177
www.smithgroupjjr.com

FIGURE
7-TREE

CEC within bridge project limits, area used for large machinery parking

CS
1 Missing 2015

AT - (1) Dead 2015

CEC and QM within bridge project limits.
CEC appears undamaged at this time.
QM damaged by materials storage.

SC - All Dead
(2) 2015
(1) 2016

CS - (2) Dead 2015

AG within bridge project limits, damaged by construction

Last remaining CS removed by bridge project

SN - beaver damage, still alive

SC - All Dead 2015

PO within bridge project limits, appears undamaged by construction at this time but vehicles have driven within drip line of canopy

AF - All Dead
(1) 2015
(2) 2016

SD - All Missing 2015

COC - (1) Mising 2015

BN - (1) Dead 2015

CS - (1) Missing 201

Beaver Damage, Regrowing from Root

SN missing, found multiple dead willow branches right at the project silt fence line. Unclear whether this was damaged by construction or had already been lost to the beavers and was growing back from the root when the placement of the silt fence impacted it.

All AF Missing Under Downed Tree, 2016

CM - (2) Dead 2015

SC - (2) Dead 2015

Relocated 2015

CM - (1) Dead 2016

2 AF removed by bank stabilization project

MATCHLINE DRAWING B-11I

LEGEND:
- LIMIT OF ACTUAL DISTURBANCE
- QM TREE REMOVED FROM MONITORING - 2015
- PA SHRUB REMOVED FROM MONITORING - 2015
- ACCEPTABLE CONDITION
- PLANT DEAD
- ORIGINAL PLANT DEAD, REGROWING FROM ROOT
- TREE LEADER DEAD, LOWER PORTION ALIVE
- PLANT MISSING WITHIN ORIGINAL STAKES OR CANNOT BE LOCATED
- MONITORING NOT REQUIRED

0 40' 80'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2016 ANNUAL MONITORING

REACH 8
2016 TREE AND SHRUB MONITORING

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11H T

WCERT Native Vegetation Management Inspection Report

To:	Jessie Fink (SmithGroupJJR), Mike Polito (Tallgrass Restoration), Deepak Bhojwani (WCERT), Mark O'Leary (AES), and Cecily Cunz (AES)
From:	Bill Stoll (AES) and Kasey Clark (AES)
Project Name:	Kress Creek / West Branch DuPage River
Project Client:	West Chicago Environmental Response Trust (WCERT)
AES Project #:	17-0111
Date:	July 26, 2017

On July 20, we inspected with Mike Polito all WCERT sites that Tallgrass Restoration is managing this season. Below is a brief description of the management activities that have been complete so far this season and those planned for the rest of the year at each site. Site photos follow the descriptions.

Reach 5D (Mack Road)
Site: 0.23 acres savanna restoration
2017 Management Completed: Clover, sweet clover, and Dame's rocket were spot herbicided on May 24, and the site was mowed the week of July 10.
Condition: Vegetation cover has improved to 90% and is dominated by rye grass.
Planned Management: Spot herbicide weeds (e.g. sweet clover and ragweed) 1X.

Reach 5E
Site: 4.3 acres mostly savanna restoration with some wetland and floodplain restoration
2017 Management Completed: Mowed twice this year including the week of July 10. T6 area and areas between T4 and the river were brushed.
Condition: Site is a first year seeding and is dominated by the following weeds: clover, sweet clover, black medic, plantain, fleabane, and Queen Anne's lace.
Planned Management: Mow site again in late august. Herbicide teasel and cut giant ragweed near river. Site has not been spot herbicided this season because it would have to be extensive and would kill off most of the forbs that were seeded last fall. We will reassess later this season, but will likely wait to herbicide until next season to give native species a chance to establish and then carry out a more targeted herbiciding.

Reach 8 Pod R8-3
Site: 0.14 acres woodland and river bank management.
2017 Management Completed: Herbicided honeysuckle in early July.
Planned Management: Spot mow ragweed and remove poison ivy and bindweed.

Reach 8 Area 4
Site: 0.35 acres wetland and floodplain restoration.
2017 Management Completed: Spot herbicided garlic mustard (GM), reed canary grass (RCG),and creeping Charlie on May 24 and mowed the week of July 10 including removing some buckthorn.
Planned Management: Spot herbicide 1-2X targeting teasel and other weeds.

Reach 8 Area 5
Site: 0.28 acres wetland and floodplain restoration
2017 Management Completed: Spot herbicided RCG, moneywort, and giant ragweed on May 24 and the week of July 10.
Planned Management: Spot herbicide moneywort and cut giant ragweed, box elder and honeysuckle.

Reach 8 Area 6
Site: 0.23 acres wetland and floodplain restoration
2017 Management Completed: Site was spot herbicided in the May and in early July for ragweed, purple loosestrife (PL), RCG, and *Phragmites*.
Planned Management: Spot herbicide PL and *Phragmites* and mow giant ragweed, mugwort; cut or herbicide RCG, PL, field mustard (*Brasica kaber*), creeping Charlie, and black locust in the smaller area.

Reach 8 Area 11
Site: 0.5 acres floodplain management
2017 Management Completed: Site was spot herbicided in May and then overseeded. RCG, ragweed, and creeping Charlie (and Canada goldenrod on the S side of the entrance road) were spot herbicided again in early July.
Planned Management: Spot mow goldenrod and spot herbicide ragweed, giant ragweed and yellow mustard and cut woody weeds including green ash, silver maple, black locust, and American elm.
The FPD continues to use the T2 area as an access road. AES or JJR will contact the FPD.

Reach 8 Area 12
Site: 8.98 acres of mostly prairie and some wetland and floodplain restoration
2017 Management Completed: Clover, sweet clover, thistle, Canada goldenrod, and other weeds were spot herbicided on May 30 and again in early July. Goldenrod was greatly reduced at the north end of site.
Planned Management: 1) spot mow Canada goldenrod, Queen Anne's lace, and ragweed in T7& T8 areas, 2) spot herbicide sweet clover around T7, 3) cut and remove cottonwood saplings around T8, 4) mow Queen Anne's lace and other weed around spoil piles to be removed, 5) Mow ragweed, giant ragweed and Queen Anne's lace, and spot herbicide sweet clover around T3,T4 & T6.

AES collected species lists in all these areas in June and will conduct quantitative vegetation sampling (i.e. transects) in August. Please let me know if you have any questions.

Sincerely,

William W. Stoll
Senior Ecologist / Regional Manager
Applied Ecological Services
120 West Main St.
West Dundee, IL 60118
Office: 847-844-9385
Cell: 773-507-0983
bill@appliedeco.com

Photos

Photo 1. Reach 8 – Area 11, Transect 1, facing east.

Photo 2. Reach 8, FPD access road, facing south.

Photo 3. Reach 8 – Area 11, Transect 2, facing north.

Photo 4. Reach 8, Area 12, south of gravel path, facing west.

Photo 5. Reach 8 – Area 12, Transect 8. Timber mat access route for streambank stabilization project.

Photo 6. Reach 8 – Area 12, Transect 7 area. Timber mat access route for streambank stabilization project.

Photo 7. Reach 8 - Area 12, Transects 3 & 4 area, facing northwest.

Photo 8. Reach 8 - Area 12, Transects 3 & 4 area, facing southwest.

Photo 9. Reach 8 - Area 4 – Transect 12, facing north.

Photo 10. Reach 8 - Area 5 – Transect 13, facing south.

Photo 11. Reach 8 – Area 6, facing south.

Photo 12. Pod 8-3, facing west.

Photo 13. Reach 5E – Transect 2, facing northeast.

Photo 14. Reach 5E - Transect 4, facing north.

Photo 15. Reach 8 – Area 5E, Transect 4 area, facing southwest.

Photo 16. Reach 8 – Area 5E, Transect 1 area, facing southwest.

Photo 17. Reach 5D – Mack Road, Transect 2, facing east.

SMITHGROUPJJR

FIELD OBSERVATION REPORT

Project name: Kress Creek / West Branch DuPage River Site
West Chicago Environmental Response Trust (WCERT)

Project number: 10110.000

Location: Reach 8: Bridge Construction Area

Date: September 6, 2017
Issue date: September 11, 2017

Participants: Jessie Fink, SmithGroupJJR
Connor Nett, SmithGroupJJR

Weather: Sunny, temperature in 60's

Distribution:
Deepak Bhojwani, WCERT
Mark O'Leary / Cecily Cunz / Bill Stoll, Applied Ecological Services

Notes:

This visit was conducted to assess survival of trees and shrubs for the required annual monitoring program. During the assessment, it was noted that several trees and shrubs were damaged by bridge construction activities in Reach 8. These plants are noted on the attached diagram and documented in the following photographs.

CEC located in large machinery parking zone.

QM located in materials storage zone, branches broken

CEC located by old bridge

AG damaged by construction

PO located in construction limits, immediately adjacent to new bridge riprap

Location of 2 missing AF in bank stabilization area. Shrubs should have been located between birch at left of photo and creek, in area where rock is placed.

Respectfully submitted,

Jessie C Fink

Jessie Fink, Landscape Architect
SmithGroupJJR

Our summarization of this Field Observation Report is transcribed as above. Please notify the writer within five (5) business days of this transcription of any disagreement as the foregoing becomes part of the project record and is the basis upon which we will proceed.

From: Jessie Fink [Jessie.Fink@smithgroupjjr.com]
Sent: Thursday, September 28, 2017 3:29 PM
To: Lock, Jamie
Cc: Fahey, Jenna; Bhojwani, Deepak; Mark J. O'Leary; Cecily M. Cunz; William W. Stoll
Subject: WCERT trees impacted by bridge construction
Attachments: RPT 2017_0906_Construction Tree Diagram.pdf; RPT 2017_0906_Construction Tree Photos.pdf

Hi Jamie,
WCERT completed the tree and shrub field monitoring visit in early September at Mack Road and Reach 8. In general, the sites looked fairly good. We lost a few trees and shrubs since last year's visit (primarily due to the beaver activity you noted last spring in Reach 8 when we upgraded the tree protection) but overall had better survival overall than previous years.

We did note during the assessment that several trees and shrubs at both reaches need their stakes reset again. As this task would be much easier to accomplish next spring when the ground is softer for driving stakes and the rest of the vegetation isn't as tall, we're going to have Tallgrass Restoration complete the resetting in early 2018.

However, I would like to initiate a discussion with the Local Communities regarding trees and shrubs impacted by the bridge construction at McDowell Grove Forest Preserve in Reach 8. I've attached a field report with photos and a marked up location map using last year's diagram of this area. The new notes on the diagram (blue outlined boxes) show the locations of 6 trees and 1 shrub in the bridge area construction zone which were still alive last year. These plants either have been or have the potential to be impacted by construction activities within their root zone. We request that these plants be removed from WCERT's responsibility for monitoring and replacement. Note, there are also 2 AF shrubs located on the diagram which were removed by the bank stabilization project on Ferry Creek. Given that the Ferry Creek project was undertaken by WCERT to repair the erosion, we will be noting in this year's annual report that those shrubs require future replacement by WCERT.

Please let me know your thoughts on the construction damage, so that we can include the resolution of the issue in this year's report.
Thanks!
Jess

Jessie Fink, ASLA, PLA
Landscape Architect
.....

SmithGroupJJR
44 East Mifflin Street, Suite 500
Madison, WI 53703

t 608.251.1177 **d** 608.327.4411
f 734.780.8972

Jessie.Fink@smithgroupjjr.com

Expect the Unexpected.
Visit www.smithgroupjjr.com

Follow us on LinkedIn | @SmithGroupJJR

WCERT Native Vegetation Management Inspection Report

To:	Deepak Bhojwani (WCERT), Jessie Fink (SmithGroupJJR), Mike Polito (Tallgrass Restoration), Mark O'Leary (AES), and Cecily Cunz (AES)
From:	Bill Stoll (AES)
Project Name:	Kress Creek / West Branch DuPage River
Project Client:	West Chicago Environmental Response Trust (WCERT)
AES Project #:	17-0111
Date:	October 6, 2017

On September 22, Mike Polito and I inspected most of the WCERT sites that Tallgrass Restoration is managing this season. Below is a brief description of the management activities that have been completed since our last inspection on July 20 and recommendations for the rest of this season and next year. Site photos follow the descriptions and recommendations.

Reach 5D (Mack Road)
Site: 0.23 acres savanna restoration
Management completed since July: Spot herbicided clover, bluegrass, and woody resprouts in early August and mowed in September.
Condition: Vegetation cover is nearly 100% and is dominated by rye grass and Chinese cup grass (*Eriochloa villosa*).
Management Recommendations: Did not visit site. No additional management planned for this year. We will inspect later this fall.

Reach 5E
Site: 4.3 acres mostly savanna restoration with some wetland and floodplain restoration.
Management completed since July: Spot herbicided clover and ragweed in the savanna areas in August and mowed the savanna areas in early September.
Condition: Site is a first year seeding and is dominated by the following weeds: clover, sweet clover, black medic, plantain, fleabane, and Queen Anne's lace.
Management Recommendations: Re-seed entire savanna area.

- Broadcast herbicide entire savanna area this fall.
- Disc and then herbicide again savanna area in spring.
- Re-seed site with modified savanna mix (to include more prairie species). We will work to obtain approval for the County for changes to the Savanna seed mix.
- Check and spot herbicide reed canary grass (RCG) and *Phragmites* along river (in restored floodplain areas).

Reach 8 Pod R8-3
Site: 0.14 acres woodland and river bank management.
Management completed since July: Spot mowed ragweed and pokeweed, pulled bindweed, and spot herbicided thistle and burdock in early August. Also removed poison ivy and other woody invasives in woods.

Management Recommendations:

- Cut and treat box elder, buckthorn, and honeysuckle in woods this fall.
- Spot herbicide giant ragweed, garlic mustard, and creeping Charlie in the spring.

Reach 8 Area 4

Site: 0.35 acres wetland and floodplain restoration.
Management completed since July: Spot herbicided in August and mowed in September.
Management Recommendations:

- Spot herbicide teasel and other weeds in the spring.

Reach 8 Area 5

Site: 0.28 acres wetland and floodplain restoration
Management completed since July: Spot herbicided moneywort and cut giant ragweed and removed box elder and honeysuckle in early August.
Management Recommendations:

- Spot herbicide RCG and other weeds in the spring.
- Over-seed bare areas (from killing off moneywort) in the spring after spot herbiciding.

Reach 8 Area 6

Site: 0.23 acres wetland and floodplain restoration
Management completed since July: Spot herbicided RCG and other weeds and cut and removed giant ragweed and black locust in early August.
Management Recommendations:
North area:

- Spot herbicide creeping Charlie, *Phragmites*, and other weeds in spring.

South Area:

- Cut and remove mulberry and box elder this fall.
- Spot herbicide RCG and other weeds in spring.
- Over-seed in spring after spot herbiciding.

Reach 8 Area 11

Site: 0.5 acres floodplain management
Management completed since July: No management has occurred in this area since July because of the bridge construction.
Management Recommendations:
S of bridge:

- Spot herbicide Canada goldenrod and giant ragweed in early spring.
- Protect redbud and bur oak during construction.
- Remind FPD not the use area as an access route.

N of bridge:

- Cut and treat silver maple and black locust resprouts this fall.
- Burn in spring.
- Spot herbicide Canada goldenrod and giant ragweed in spring after burn.

Reach 8 Area 12

Site: 8.98 acres of mostly prairie and some wetland and floodplain restoration
Management completed since July: Ragweed, Queen Anne's lace, sweet clover, and cottonwood seedings were mowed and thistle and other weeds were spot herbicided in early August.
Recommended Management:

T7 area:

- Spot herbicide Canada goldenrod and giant ragweed in early spring.
- Spot herbicide stream restoration access route and then seed (upland prairie) this fall.

T8 area:

- Broadcast herbicide stream restoration access route and then seed (open floodplain and upland prairie) this fall.

T6 area:

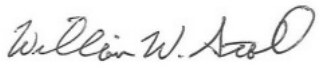
- Spot herbicide giant ragweed and Canada goldenrod in spring.

T3 and 4 area:

- Burn area north of path in spring.
- Spot herbicide Canada goldenrod at north end, in swales, and other areas where it is dense.
- Area near Raymond Drive disturbed during bridge construction will need to be restored.

AES conducted quantitative vegetation sampling (i.e. transects) the week before our site inspection (9/14 & 9/15). We will inspect the site again later this fall to confirm management plans for the spring. Please let me know if you have any questions.

Sincerely,



William W. Stoll
Senior Ecologist / Regional Manager
Applied Ecological Services
120 West Main St.
West Dundee, IL 60118
Office: 847-844-9385
Cell: 773-507-0983
bill@appliedeco.com

Photos

Photo 1. Reach 8 – Area 11, Transect 2, bur oak in construction zone south of old bridge.

Photo 2. Reach 8 - Area 12, construction access along Raymond Dr.

Photo 3. Reach 8 – Area 12, stream restoration access route between Transects 5 & 7.

Photo 4. Reach 8 - Area 12, seeded bank in stream restoration area south of Transects 5 & 7.

Photo 5. Reach 8 – Area 12, planted shelf in stream restoration area south of Transects 5 & 7.

Photo 6. Reach 8 – Area 12, stream restoration access route along Transect 8.

Photo 7. Reach 8 - Area 12, seeded bank in stream restoration area east of Transect 8.

Photo 8. Reach 8 - Area 12, Transects 3 & 4 area, facing north.

Photo 9. Reach 8 - Area 12, Transects 3 & 4 area, facing southwest.

Photo 10. Reach 8 - Area 4, Transect 12, facing north.

Photo 11. Reach 8 – Area 5, Transect 13, facing north.

Photo 12. Reach 8 – Area 6, Transect 14, facing north.

Photo 13. Reach 8 – Area 6, Transect 15, facing north.

Photo 14. Reach 8 – Pod R8-3, facing south.

Photo 15. Reach 5E, Transect 1 area, facing north.

Photo 16. Reach 5E, Transect 2 area, facing northeast.

Photo 17. Reach 5E, Transect 3 area, facing west.

From: William W. Stoll
Sent: Tuesday, December 05, 2017 12:30 PM
To: 'Bhojwani, Deepak'
Cc: Mark J. O'Leary; Jessie Fink; Mike Polito; Kasey A. Clark; Cecily M. Cunz
Subject: WCERT management recommendation updates

Deepak – During the field visit referenced below we inspected Reach 8, Areas 11 and 12, and Reach 5E. The outcome of our meeting is summarized below:

Reach 8 Area 11:

- Seed area N of bridge (T1) with a few native wetland grasses in spring after a burn. Mow area with weed whips prior to burning.
- Add ~100 wetland plugs on the bench along the shoreline near the shelter.

Reach 8 Area 12:

- Both construction access routes (T8 and between T5 & T7) will be seeded this month with appropriate native seed mix.
- These areas had been herbicided earlier in the fall in preparation for seeding.
- Spot herbicide blue grass and RCG at N end in spring.
- Mow N end in late spring.

Reach 5

- No change to the plan found in 10/6/17 site inspection report.
- Jamie Lock is comfortable with changing the seed mix for the site, but she and FPD will need to review and approve it.

Bill

William W. Stoll
Regional Manager / Senior Ecologist

Applied Ecological Services, Inc.
120 W. Main St.
West Dundee, IL 60118
847-844-9385 (o)
773-507-0983 (m)

From: William W. Stoll [mailto:bill@appliedeco.com]
Sent: Friday, November 17, 2017 6:01 PM
To: Bhojwani, Deepak <Deepak.Bhojwani@WestonSolutions.com>
Cc: Mark J. O'Leary <mark.oleary@appliedeco.com>; Jessie Fink <Jessie.Fink@smithgroupjjr.com>; Mike Polito <Mike.Polito@tallgrassrestoration.com>; Kasey A. Clark <kasey.clark@appliedeco.com>; Cecily M. Cunz <cecily.cunz@appliedeco.com>
Subject: bridge construction at McDowell Grove

Deepak – Mark O'Leary, Mike Polito, and I inspected some of the WCERT sites today to review management. While at McDowell Grove, we noticed that the area of disturbance on each side of the east end of the new bridge is much larger than earlier in the construction. See the attached photos. These are areas that were restored as part of the WCERT project

(including trees and shrubs) I will let Jamie at the County know on Monday, but I wanted you to know first.

Bill

William W. Stoll
Regional Manager / Senior Ecologist

Applied Ecological Services, Inc.
120 W. Main St.
West Dundee, IL 60118
847-844-9385 (o)
773-507-0983 (m)

2017 Annual Monitoring Report

Reaches 5D, 5E, 8, and the Mack Road Staging Area of the Kress Creek / West Branch DuPage River Site

Appendix B

Vascular Plant Inventory Data

SITE: WCERT
LOCALE: REACH 8A
BY: MO, BS, KC, WO
DATE: 6/7/2017 & 9/15/17

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.29	SPECIES RICHNESS (ALL)	163
MEAN C (ALL SPECIES)	2.40	SPECIES RICHNESS (NATIVE)	119
MEAN C (NATIVE TREES)	3.67	% NON-NATIVE	0.27
MEAN C (NATIVE SHRUBS)	3.38	WET INDICATOR (ALL)	0.02
MEAN C (NATIVE HERBACEOUS)	3.20	WET INDICATOR (NATIVE)	-0.22
FQAI (NATIVE SPECIES)	35.84	% HYDROPHYTE (MIDWEST)	0.61
FQAI (ALL SPECIES)	30.63	% NATIVE PERENNIAL	0.60
ADJUSTED FQAI	28.07	% NATIVE ANNUAL	0.12
% C VALUE 0	0.39	% ANNUAL	0.16
% C VALUE 1-3	0.27	% PERENNIAL	0.77
% C VALUE 4-6	0.26		
% C VALUE 7-10	0.07		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
ACENEG	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
ACESAI	Acer saccharinum	Acer saccharinum	Silver Maple	0	FACW	FACW	-1	Tree	Perennial	Native
AGASCR	Agastache scrophulariaefolia	Agastache scrophulariaefolia	Purple Giant Hyssop	5	UPL	UPL	2	Forb	Perennial	Native
EUPRUG	Ageratina altissima	Eupatorium rugosum	White Snakeroot	4	FACU	FACU	1	Forb	Perennial	Native
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
ALLPET	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
AMARET	Amaranthus retroflexus	AMARANTHUS RETROFLEXUS	Red-Root	0	FACU	FACU	1	Forb	Annual	Adventive
AMATUB	Amaranthus tuberculatus	Acnida altissima	Rough-Fruit Amaranth	0	OBL	OBL	-2	Forb	Annual	Native
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native
AMBTRI	Ambrosia trifida	Ambrosia trifida	Great Ragweed	0	FAC	FAC	0	Forb	Annual	Native
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	FACU	0	Grass	Perennial	Native

ANECAN	Anemone canadensis	Anemone canadensis	Round-Leaf Thimbleweed	4	FACW	FACW	-1	Forb	Perennial	Native
ANECYL	Anemone cylindrica	Anemone cylindrica	Thimbleweed	6	UPL	UPL	2	Forb	Perennial	Native
APOSIB	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native
ARCMIN	Arctium minus	ARCTIUM MINUS	Lesser Burrdock	0	FACU	FACU	1	Forb	Biennial	Adventive
ARTVUL	Artemisia vulgaris	ARTEMISIA VULGARIS	Common Mugwort	0	UPL	UPL	2	Forb	Perennial	Adventive
ASCINC	Asclepias incarnata	Asclepias incarnata	Swamp Milkweed	4	OBL	OBL	-2	Forb	Perennial	Native
ASCSYR	Asclepias syriaca	Asclepias syriaca	Common Milkweed	0	FACU	UPL	1	Forb	Perennial	Native
BARVUL	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket	0	FAC	FAC	0	Forb	Biennial	Adventive
BIDCER	Bidens cernua	Bidens cernua	Nodding Burr-Marigold	5	OBL	OBL	-2	Forb	Annual	Native
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	FACW	-1	Forb	Annual	Native
BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	UPL	1	Grass	Perennial	Adventive
CONSEP	Calystegia sepium	Convolvulus sepium	Hedge False Bindweed	1	FAC	FAC	0	Forb	Perennial	Native
CAMAME	Campanulastrum americanum	Campanula americana	American-Bellflower	3	FAC	FAC	0	Forb	Annual	Native
CXBLAN	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	FAC	0	Sedge	Perennial	Native
CXGRIS	Carex grisea	Carex grisea	Inflated Narrow-Leaf Sedge	2	FAC	FAC	0	Sedge	Perennial	Native
CXJAME	Carex jamesii	Carex jamesii	James' Sedge	5	UPL	UPL	2	Sedge	Perennial	Native
CXSTIP	Carex stipata	Carex stipata	Stalk-Grain Sedge	3	OBL	OBL	-2	Sedge	Perennial	Native
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
CARCOR	Carya cordiformis	Carya cordiformis	Bitter-Nut Hickory	7	FACU	FAC	1	Tree	Perennial	Native
CELOCC	Celtis occidentalis	Celtis occidentalis	Common Hackberry	3	FAC	FAC	0	Tree	Perennial	Native
CHEALB	Chenopodium album	CHENOPODIUM ALBUM	Lamb's-Quarters	0	FACU	FACU	1	Forb	Annual	Adventive
CINARU	Cinna arundinacea	Cinna arundinacea	Sweet Wood-Reed	5	FACW	FACW	-1	Grass	Perennial	Native
CIRLUT	Circaea canadensis	Circaea lutetiana canadensis	Broad-Leaf Enchanter's-Nightshade	1	FACU	FACU	1	Forb	Perennial	Native
CIRARV	Cirsium arvense	CIRSIUM ARVENSE	Canadian Thistle	0	FACU	FACU	1	Forb	Perennial	Adventive
CONMAC	Conium maculatum	CONIUM MACULATUM	Poison-Hemlock	0	FACW	FACW	-1	Forb	Biennial	Adventive
COROBL	Cornus obliqua	Cornus obliqua	Pale Dogwood	6	FACW	FACW	-1	Shrub	Perennial	Native
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
CRYCAN	Cryptotaenia canadensis	Cryptotaenia canadensis	Canadian Honewort	2	FAC	FAC	0	Forb	Perennial	Native
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native

CYPSTR	Cyperus strigosus	Cyperus strigosus	Straw-Color Flat Sedge	1	FACW	FACW	-1	Sedge	Perennial	Native
DACGLO	Dactylis glomerata	DACTYLIS GLOMERATA	Orchard Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne's Lace	0	UPL	UPL	2	Forb	Biennial	Adventive
DIPLAC	Dipsacus laciniatus	DIPSACUS LACINIATUS	Cut-Leaf Teasel	0	UPL	FACU	2	Forb	Biennial	Adventive
ECHPUR	Echinacea purpurea	Echinacea purpurea	Purple Coneflower	3	UPL	UPL	2	Forb	Perennial	Native
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
ELYVIL	Elymus villosus	Elymus villosus	Hairy Wild Rye	5	FACU	FACU	1	Grass	Perennial	Native
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	FACW	-1	Grass	Perennial	Native
EPICOL	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	FACU	1	Forb	Biennial	Native
ERICAN	Erigeron canadensis	Erigeron canadensis	Canadian Horseweed	0	FACU	FACU	1	Forb	Annual	Native
ERYHIE	Erysimum hieracifolium	ERYSIMUM HIERACIIFOLIUM	Hawkweed Mustard	0	UPL	UPL	2	Forb	Biennial	Adventive
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native
SOLGRA	Euthamia graminifolia	Solidago graminifolia; Solidago graminifolia nuttallii	Flat-Top Goldentop	4	FACW	FAC	-1	Forb	Perennial	Native
POLCIL	Fallopia cilinodis	Polygonum cilinode	Bristly Climbing Buckwheat	10	UPL	UPL	2	Vine	Perennial	Native
GALAPA	Galium aparine	Galium aparine	Sticky-Willy	1	FACU	FACU	1	Forb	Annual	Native
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
VERPER	Glandularia peruviana	VERBENA PERUVIANA	Peruvian Vervain	0	UPL	UPL	2	Forb	Perennial	Adventive
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
GLYSTR	Glyceria striata	Glyceria striata	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
HACVIR	Hackelia virginiana	Hackelia virginiana	Beggar's-Lice	0	FACU	FACU	1	Forb	Biennial	Native
HELGRO	Helianthus grosseserratus	Helianthus grosseserratus	Saw-Tooth Sunflower	2	FACW	FACW	-1	Forb	Perennial	Native
HELMAX	Helianthus maximilianii	HELIANTHUS MAXIMILIANII	Maximilian's Sunflower	0	UPL	UPL	2	Forb	Perennial	Adventive
HELTUB	Helianthus tuberosus	Helianthus tuberosus	Jerusalem-Artichoke	3	FACU	FACU	1	Forb	Perennial	Native
HERMAX	Heracleum maximum	Heracleum maximum	American Cow-Parsnip	5	FACW	FACW	-1	Forb	Perennial	Native
IMPCAP	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native

IMPPAL	Impatiens pallida	Impatiens pallida	Pale Touch-Me-Not	6	FACW	FACW	-1	Forb	Annual	Native
JUGNIG	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	FACU	1	Tree	Perennial	Native
LEEORY	Leersia oryzoides	Leersia oryzoides	Rice Cut Grass	4	OBL	OBL	-2	Grass	Perennial	Native
LEEVIR	Leersia virginica	Leersia virginica	White Grass	7	FACW	FACW	-1	Grass	Perennial	Native
LEOCAR	Leonurus cardiaca	LEONURUS CARDIACA	Motherwort	0	UPL	UPL	2	Forb	Perennial	Adventive
LINBEN	Lindera benzoin	Lindera benzoin	Northern Spicebush	7	FACW	FACW	-1	Shrub	Perennial	Native
LONMAA	Lonicera maackii	LONICERA MAACKII	Amur Honeysuckle	0	UPL	UPL	2	Shrub	Perennial	Adventive
LONTAT	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1	Shrub	Perennial	Adventive
LYSNUM	Lysimachia nummularia	LYSIMACHIA NUMMULARIA	Creeping-Jenny	0	FACW	FACW	-1	Forb	Perennial	Adventive
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive
SMIRAC	Maianthemum racemosum	Smilacina racemosa	Feathery False Solomon's-Seal	3	FACU	FACU	1	Forb	Perennial	Native
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	UPL	2	Forb	Biennial	Adventive
MELLOF	Melilotus officinalis	MELILOTUS ALBA	Yellow Sweet-Clover	0	FACU	FACU	1	Forb	Biennial	Adventive
MORALB	Morus alba	MORUS ALBA	White Mulberry	0	FAC	FACU	0	Tree	Perennial	Adventive
MUHMEX	Muhlenbergia mexicana	Muhlenbergia mexicana	Mexican Muhly	5	FACW	FACW	-1	Grass	Perennial	Native
MUHSCH	Muhlenbergia schreberi	Muhlenbergia schreberi	Nimblewill	0	FAC	FAC	0	Grass	Perennial	Native
NEPCAT	Nepeta cataria	NEPETA CATARIA	Catnip	0	FACU	FACU	1	Forb	Perennial	Adventive
OENBIE	Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	FACU	1	Forb	Biennial	Native
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	FACU	1	Forb	Perennial	Native
SENPAU	Packera paupercula	Senecio pauperculus	Balsam Groundsel	6	FAC	FAC	0	Forb	Perennial	Native
PANDIC	Panicum dichotomiflorum	Panicum dichotomiflorum	Fall Panic Grass	0	FACW	FACW	-1	Grass	Annual	Native
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	FACU	1	Vine	Perennial	Native
POLAMP	Persicaria amphibia	Polygonum coccineum; Polygonum amphibium stipulaceum	Water Smartweed	4	OBL	OBL	-2	Forb	Perennial	Native
PERHYR	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	OBL	-2	Forb	Annual	Native
POLPER	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive
POLPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native
POLVIR	Persicaria virginiana	Polygonum virginianum	Jumpseed	2	FAC	FAC	0	Forb	Perennial	Native

PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
PHRAUSM	Phragmites australis ssp. americanus	Phragmites australis	Common Reed	1	FACW	FACW	-1	Grass	Perennial	Native
PHYVIR	Physostegia virginiana	Physostegia virginiana	Obedient-Plant	6	FACW	FACW	-1	Forb	Perennial	Native
PHYAME	Phytolacca americana	Phytolacca americana	American Pokeweed	1	FACU	FACU	1	Forb	Perennial	Native
PILFON	Pilea fontana	Pilea fontana	Lesser Clearweed	7	FACW	FACW	-1	Forb	Annual	Native
PILPUM	Pilea pumila	Pilea pumila	Canadian Clearweed	5	FACW	FACW	-1	Forb	Annual	Native
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	FACU	1	Forb	Perennial	Adventive
PLAMAJ	Plantago major	PLANTAGO MAJOR	Great Plantain	0	FAC	FACU	0	Forb	Perennial	Adventive
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	FAC	0	Forb	Annual	Native
POACOM	Poa compressa	POA COMPRESSA	Flat-Stem Blue Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adventive
POLAVI	Polygonum aviculare	POLYGONUM AVICULARE	Yard Knotweed	0	FAC	FACU	0	Forb	Annual	Adventive
DUCIND	Potentilla indica	DUCHESNEA INDICA	Indian-Strawberry	0	FACU	FACU	1	Forb	Perennial	Adventive
PRUVIR	Prunus virginiana	Prunus virginiana	Choke Cherry	3	FACU	FACU	1	Shrub	Perennial	Native
PYCVIR	Pycnanthemum virginianum	Pycnanthemum virginianum	Virginia Mountain-Mint	5	FACW	FACW	-1	Forb	Perennial	Native
QUEBIC	Quercus bicolor	Quercus bicolor	Swamp White Oak	6	FACW	FACW	-1	Tree	Perennial	Native
RANABO	Ranunculus abortivus	Ranunculus abortivus	Kidney-Leaf Buttercup	0	FACW	FAC	-1	Forb	Annual	Native
RANSEP	Ranunculus hispidus var. nitidus	Ranunculus septentrionalis	Bristly Buttercup	5	FAC	FAC	0	Forb	Perennial	Native
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
RORPAL	Rorippa palustris		0 Bog Yellowcress	4	OBL	OBL	-2	Forb	Perennial	Native
RUBOCC	Rubus occidentalis	Rubus occidentalis	Black Raspberry	2	UPL	UPL	2	Shrub	Perennial	Native
RUBPUB	Rubus pubescens	Rubus pubescens	Dwarf Red Raspberry	10	FACW	FACW	-1	Forb	Perennial	Native
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	FACU	1	Forb	Perennial	Native
RUDLAC	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	FACW	-1	Forb	Perennial	Native
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	FACU	1	Forb	Perennial	Native
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	FACU	1	Forb	Annual	Native
RUMALT	Rumex altissimus	Rumex altissimus	Pale Dock	2	FACW	FACW	-1	Forb	Perennial	Native
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive
SALDIS	Salix discolor	Salix discolor	Pussy Willow	2	FACW	FACW	-1	Shrub	Perennial	Native

SAMCAN	Sambucus nigra ssp. canadensis	Sambucus canadensis	Black Elder	1	FACW	FACW	-1	Shrub	Perennial	Native
SANGRE	Sanicula odorata	Sanicula gregaria	Clustered Black-Snakeroot	2	FAC	FAC	0	Forb	Perennial	Native
SAUCER	Saururus cernuus	Saururus cernuus	Lizard's-Tail	9	OBL	OBL	-2	Forb	Perennial	Native
SETGLA	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive
SILPER	Silphium perfoliatum	Silphium perfoliatum	Cup-Plant	5	FACW	FACW	-1	Forb	Perennial	Native
SMILAS	Smilax lasioneuron	Smilax lasioneura	Common Carrion Flower	5	UPL	UPL	2	Vine	Perennial	Native
SOLALT	Solidago altissima	Solidago altissima	Tall Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1	Forb	Perennial	Native
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	FACU	1	Grass	Perennial	Native
STATEN	Stachys tenuifolia	Stachys tenuifolia hispida	Smooth Hedge-Nettle	5	OBL	FACW	-2	Forb	Perennial	Native
STEMED	Stellaria media	STELLARIA MEDIA	Common Chickweed	0	FACU	FACU	1	Forb	Annual	Adventive
SYMORB	Symphoricarpos orbiculatus	SYMPHORICARPOS ORBICULATUS	Coral-Berry	0	FACU	FACU	1	Shrub	Perennial	Adventive
ASTSAGD	Symphyotrichum drummondii	Aster sagittifolius drummondii	Drummond's Aster	2	UPL	UPL	2	Forb	Perennial	Native
ASTDUM	Symphyotrichum dumosum	Aster dumosus	Rice Button American-Aster	5	FAC	FAC	0	Forb	Perennial	Native
ASTSIM	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3	FAC	FACW	0	Forb	Perennial	Native
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	FAC	-1	Forb	Perennial	Native
ASTNOV	Symphyotrichum novae-angliae	Aster novae-angliae	New England American-Aster	4	FACW	FACW	-1	Forb	Perennial	Native
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	FACU	1	Forb	Perennial	Native
ASTPUN	Symphyotrichum puniceum	Aster puniceus; Aster puniceus firmus	Purple-Stem American-Aster	7	OBL	OBL	-2	Forb	Perennial	Native
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	FACU	1	Forb	Perennial	Adventive
THADAS	Thalictrum dasycarpum	Thalictrum dasycarpum hypoglaucum	Purple Meadow-Rue	5	FACW	FACW	-1	Forb	Perennial	Native
THATHA	Thalictrum thalictroides	Anemonella thalictroides	Rue-Anemone	7	FACU	FACU	1	Forb	Perennial	Native
TILAME	Tilia americana	Tilia americana	American Basswood	5	FACU	FACU	1	Tree	Perennial	Native

RHURAD	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	FAC	0	Vine	Perennial	Native
TRAOHI	Tradescantia ohiensis	Tradescantia ohiensis	Bluejacket	2	FACU	FACU	1	Forb	Perennial	Native
TRIHYB	Trifolium hybridum	TRIFOLIUM HYBRIDUM	Alsike Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
ULMRUB	Ulmus rubra	Ulmus rubra	Slippery Elm	4	FAC	FAC	0	Tree	Perennial	Native
URTDIO	Urtica dioica ssp. gracilis	Urtica procera	Tall Nettle	2	FACW	FAC	-1	Forb	Perennial	Native
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy	4	FACW	FACW	-1	Forb	Perennial	Native
VERURT	Verbena urticifolia	Verbena urticifolia leiocarpa	White Vervain	5	FAC	FAC	0	Forb	Perennial	Native
ACTALT	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	FACW	-1	Forb	Perennial	Native
VERCOM	Veronica anagallis-aquatica	Veronica comosa	Blue Water Speedwell	10	OBL	OBL	-2	Forb	Perennial	Native
VIBLEN	Viburnum lentago	Viburnum lentago	Nanny-Berry	5	FAC	FAC	0	Shrub	Perennial	Native
VIBOPU	Viburnum opulus var. opulus	VIBURNUM OPULUS	Highbush-Cranberry	0	FAC	FACW	0	Shrub	Perennial	Adventive
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native
VITRIP	Vitis riparia	Vitis riparia	River-Bank Grape	2	FACW	FAC	-1	Vine	Perennial	Native
XANSTR	Xanthium strumarium	XANTHIUM STRUMARIUM	Rough Cockleburr	0	FAC	FAC	0	Forb	Annual	Adventive
ZIZAUR	Zizia aurea	Zizia aurea	Golden Alexanders	7	FAC	FAC	0	Forb	Perennial	Native

SITE: WCERT
LOCALE: Reach 8b
BY: WS, CC, KC, WO
NOTES: 6//6/2017 & 9/14/2001

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.87	SPECIES RICHNESS (ALL)	264
MEAN C (ALL SPECIES)	2.99	SPECIES RICHNESS (NATIVE)	204
MEAN C (NATIVE TREES)	4.61	% NON-NATIVE	0.23
MEAN C (NATIVE SHRUBS)	4.11	WET INDICATOR (ALL)	0.12
MEAN C (NATIVE HERBACEOUS)	3.75	WET INDICATOR (NATIVE)	-0.11
FQAI (NATIVE SPECIES)	55.24	% HYDROPHYTE (MIDWEST)	0.55
FQAI (ALL SPECIES)	48.56	% NATIVE PERENNIAL	0.67
ADJUSTED FQAI	34.00	% NATIVE ANNUAL	0.08
% C VALUE 0	0.32	% ANNUAL	0.13
% C VALUE 1-3	0.23	% PERENNIAL	0.82
% C VALUE 4-6	0.32		
% C VALUE 7-10	0.13		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
ACENEG	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
ACESAI	Acer saccharinum	Acer saccharinum	Silver Maple	0	FACW	FACW	-1	Tree	Perennial	Native
ACHMIL	Achillea millefolium	ACHILLEA MILLEFOLIUM	Common Yarrow	0	FACU	FACU	1	Forb	Perennial	Adventive
ACOAME	Acorus americanus	0	Several-Vein Sweetflag	7	OBL	OBL	-2	Forb	Perennial	Native
EUPRUG	Ageratina altissima	Eupatorium rugosum	White Snakeroot	4	FACU	FACU	1	Forb	Perennial	Native
AGRGRY	Agrimonia gryposepala	Agrimonia gryposepala	Tall Hairy Grooveburr	2	FACU	FACU	1	Forb	Perennial	Native
AGRPUB	Agrimonia pubescens	Agrimonia pubescens	Soft Grooveburr	5	UPL	UPL	2	Forb	Perennial	Native
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	4	OBL	OBL	-2	Forb	Perennial	Native
ALLPET	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
ALTOFF	Althaea officinalis	ALTHAEA OFFICINALIS	Common Marsh-Mallow	0	FACW	FACW	-1	Forb	Perennial	Adventive

AMARET	Amaranthus retroflexus	AMARANTHUS RETROFLEXUS	Red-Root	0	FACU	FACU	1	Forb	Annual	Adventive
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native
AMBTRI	Ambrosia trifida	Ambrosia trifida	Great Ragweed	0	FAC	FAC	0	Forb	Annual	Native
AMOFRU	Amorpha fruticosa	Amorpha fruticosa	False Indigo-Bush	6	FACW	FACW	-1	Shrub	Perennial	Native
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	FACU	0	Grass	Perennial	Native
ANECAN	Anemone canadensis	Anemone canadensis	Round-Leaf Thimbleweed	4	FACW	FACW	-1	Forb	Perennial	Native
ANGATR	Angelica atropurpurea	Angelica atropurpurea	Purple-Stem Angelica	7	OBL	OBL	-2	Forb	Perennial	Native
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native
ARCMIN	Arctium minus	ARCTIUM MINUS	Lesser Burrdock	0	FACU	FACU	1	Forb	Biennial	Adventive
ARTVUL	Artemisia vulgaris	ARTEMISIA VULGARIS	Common Mugwort	0	UPL	UPL	2	Forb	Perennial	Adventive
ASACAN	Asarum canadense	Asarum canadense	Canadian Wild Ginger	7	FACU	UPL	1	Forb	Perennial	Native
ASCSYR	Asclepias syriaca	Asclepias syriaca	Common Milkweed	0	FACU	UPL	1	Forb	Perennial	Native
ASITRI	Asimina triloba	Asimina triloba	Common Pawpaw	9	FAC	FAC	0	Tree	Perennial	Native
ASPOFF	Asparagus officinalis	ASPARAGUS OFFICINALIS	Asparagus	0	FACU	FACU	1	Forb	Perennial	Adventive
BARVUL	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket	0	FAC	FAC	0	Forb	Biennial	Adventive
BETNIG	Betula nigra	Betula nigra	River Birch	7	FACW	FACW	-1	Tree	Perennial	Native
BIDCER	Bidens cernua	Bidens cernua	Nodding Burr-Marigold	5	OBL	OBL	-2	Forb	Annual	Native
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	FACW	-1	Forb	Annual	Native
BOUCUR	Bouteloua curtipendula	Bouteloua curtipendula	Side-Oats Grama	8	UPL	UPL	2	Grass	Perennial	Native
BRANIG	Brassica nigra	BRASSICA NIGRA	Black Mustard	0	UPL	UPL	2	Forb	Annual	Adventive
BROJAP	Bromus arvensis	BROMUS JAPONICUS	Field Brome	0	FACU	FACU	1	Grass	Annual	Adventive
BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	UPL	1	Grass	Perennial	Adventive
BROTEC	Bromus tectorum	BROMUS TECTORUM	Downy Chess	0	UPL	UPL	2	Grass	Annual	Adventive
CONSEP	Calystegia sepium	Convolvulus sepium	Hedge False Bindweed	1	FAC	FAC	0	Forb	Perennial	Native
CARBUL	Cardamine bulbosa	Cardamine bulbosa	Bulbous Bittercress	6	OBL	OBL	-2	Forb	Perennial	Native
CXANNE	Carex annectens	Carex annectens xanthocarpa	Yellow-Fruit Sedge	5	FACW	FACW	-1	Sedge	Perennial	Native
CXBLAN	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	FAC	0	Sedge	Perennial	Native
CXCRIS	Carex cristatella	Carex cristatella	Crested Sedge	4	FACW	FACW	-1	Sedge	Perennial	Native
CXFRAN	Carex frankii	Carex frankii	Frank's Sedge	8	OBL	OBL	-2	Sedge	Perennial	Native
CXGRAN	Carex granularis	Carex granularis	Limestone-Meadow Sedge	4	FACW	FACW	-1	Sedge	Perennial	Native

CXGRIS	Carex grisea	Carex grisea	Inflated Narrow-Leaf Sedge	2	FAC	FAC	0	Sedge	Perennial	Native
CXLACU	Carex lacustris	Carex lacustris	Lakebank Sedge	6	OBL	OBL	-2	Sedge	Perennial	Native
CXMOLE	Carex molesta	Carex molesta	Troublesome Sedge	2	FAC	FAC	0	Sedge	Perennial	Native
CXSCOP	Carex scoparia	Carex scoparia	Pointed Broom Sedge	7	FACW	FACW	-1	Sedge	Perennial	Native
CXSTIP	Carex stipata	Carex stipata	Stalk-Grain Sedge	3	OBL	OBL	-2	Sedge	Perennial	Native
CXTENE	Carex tenera	Carex tenera	Quill Sedge	8	FACW	FAC	-1	Sedge	Perennial	Native
CXTRIB	Carex tribuloides	Carex tribuloides	Blunt Broom Sedge	3	OBL	FACW	-2	Sedge	Perennial	Native
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
CARCAR	Carpinus caroliniana ssp. virginiana	Carpinus caroliniana virginiana	American Hornbeam	8	FAC	FAC	0	Tree	Perennial	Native
CARCOR	Carya cordiformis	Carya cordiformis	Bitter-Nut Hickory	7	FACU	FAC	1	Tree	Perennial	Native
CAROVL	Carya ovalis	Carya glabra	Red Hickory	5	FACU	FACU	1	Tree	Perennial	Native
CELOCC	Celtis occidentalis	Celtis occidentalis	Common Hackberry	3	FAC	FAC	0	Tree	Perennial	Native
CEPOCC	Cephalanthus occidentalis	Cephalanthus occidentalis	Common Buttonbush	5	OBL	OBL	-2	Shrub	Perennial	Native
CERCAN	Cercis canadensis	Cercis canadensis	Redbud	10	FACU	FACU	1	Tree	Perennial	Native
CHEGLA	Chelone glabra	Chelone glabra	White Turtlehead	8	OBL	OBL	-2	Forb	Perennial	Native
CICMAC	Cicuta maculata	Cicuta maculata	Spotted Water-Hemlock	6	OBL	OBL	-2	Forb	Perennial	Native
CINARU	Cinna arundinacea	Cinna arundinacea	Sweet Wood-Reed	5	FACW	FACW	-1	Grass	Perennial	Native
CIRARV	Cirsium arvense	CIRSIUM ARVENSE	Canadian Thistle	0	FACU	FACU	1	Forb	Perennial	Adventive
CIRDIS	Cirsium discolor	Cirsium discolor	Field Thistle	2	FACU	UPL	1	Forb	Biennial	Native
CONMAC	Conium maculatum	CONIUM MACULATUM	Poison-Hemlock	0	FACW	FACW	-1	Forb	Biennial	Adventive
CORLAN	Coreopsis lanceolata	Coreopsis lanceolata	Lance-Leaf Tickseed	5	FACU	FACU	1	Forb	Perennial	Native
CORTRI	Coreopsis tripteris	Coreopsis tripteris	Tall Tickseed	5	FAC	FAC	0	Forb	Perennial	Native
COROBL	Cornus obliqua	Cornus obliqua	Pale Dogwood	6	FACW	FACW	-1	Shrub	Perennial	Native
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
CORAME	Corylus americana	Corylus americana	American Hazelnut	5	FACU	FACU	1	Shrub	Perennial	Native
CRACRU	Crataegus crus-galli	Crataegus crus-galli	Cock-Spur Hawthorn	2	FAC	FAC	0	Tree	Perennial	Native
CRYCAN	Cryptotaenia canadensis	Cryptotaenia canadensis	Canadian Honewort	2	FAC	FAC	0	Forb	Perennial	Native
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native
CYPSTR	Cyperus strigosus	Cyperus strigosus	Straw-Color Flat Sedge	1	FACW	FACW	-1	Sedge	Perennial	Native
DASMAC	Dasistoma macrophylla	Seymeria macrophylla	Mullein-Foxglove	8	FACU	FACU	1	Forb	Perennial	Native
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne's Lace	0	UPL	UPL	2	Forb	Biennial	Adventive

DESCAA	Desmodium canadense	Desmodium canadense	Showy Tick-Trefoil	4	FACU	FAC	1	Forb	Perennial	Native
DESNUD	Desmodium nudiflorum	Desmodium nudiflorum	Bare-Stem Tick-Trefoil	9	UPL	UPL	2	Forb	Perennial	Native
ECHPUR	Echinacea purpurea	Echinacea purpurea	Purple Coneflower	3	UPL	UPL	2	Forb	Perennial	Native
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
ELECOM	Eleocharis compressa	Eleocharis compressa	Flat-Stem Spike-Rush	8	FACW	FACW	-1	Sedge	Perennial	Native
ELEERY	Eleocharis palustris	Eleocharis erythropoda; Eleocharis palustris major; Eleocharis smallii	Common Spike-Rush	2	OBL	OBL	-2	Sedge	Perennial	Native
ELYCAN	Elymus canadensis	Elymus canadensis	Nodding Wild Rye	4	FACU	FACU	1	Grass	Perennial	Native
AGRREP	Elymus repens	AGROPYRON REPENS	Creeping Wild Rye	0	FACU	FACU	1	Grass	Perennial	Adventive
ELYVIL	Elymus villosus	Elymus villosus	Hairy Wild Rye	5	FACU	FACU	1	Grass	Perennial	Native
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	FACW	-1	Grass	Perennial	Native
EPICOL	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
ERASPE	Eragrostis spectabilis	Eragrostis spectabilis	Purple Love Grass	3	UPL	UPL	2	Grass	Perennial	Native
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	FACU	1	Forb	Biennial	Native
ERICAN	Erigeron canadensis	Erigeron canadensis	Canadian Horseweed	0	FACU	FACU	1	Forb	Annual	Native
ERIPHI	Erigeron philadelphicus	Erigeron philadelphicus	Philadelphia Fleabane	4	FACW	FAC	-1	Forb	Perennial	Native
ERYYUC	Eryngium yuccifolium	Eryngium yuccifolium	Button Eryngo	9	FAC	FAC	0	Forb	Perennial	Native
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	UPL	2	Forb	Perennial	Native
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native
SOLGRA	Euthamia graminifolia	Solidago graminifolia; Solidago graminifolia nuttallii	Flat-Top Goldentop	4	FACW	FAC	-1	Forb	Perennial	Native
EUPMAC	Eutrochium maculatum	Eupatorium maculatum	Spotted Trumpetweed	4	OBL	OBL	-2	Forb	Perennial	Native
EUPPUR	Eutrochium purpureum	Eupatorium purpureum	Sweet-Scented Joe-Pye-Weed	7	FAC	FAC	0	Forb	Perennial	Native
POLSCA	Fallopia scandens	Polygonum scandens	Climbing Black-Bindweed	1	FAC	FAC	0	Vine	Perennial	Native
FESRUB	Festuca rubra	FESTUCA RUBRA	Red Fescue	0	FACU	FACU	1	Grass	Perennial	Adventive
FRAVIR	Fragaria virginiana	Fragaria virginiana	Virginia Strawberry	1	FACU	FACU	1	Forb	Perennial	Native

FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	FACW	-1	Tree	Perennial	Native
GALAPA	Galium aparine	Galium aparine	Sticky-Willy	1	FACU	FACU	1	Forb	Annual	Native
GALODO	Galium odoratum	0	Sweet Woodruff	0	UPL	UPL	2	Forb	Perennial	Adventive
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
GLETRI	Gleditsia triacanthos	Gleditsia triacanthos	Honey-Locust	2	FACU	FAC	1	Tree	Perennial	Native
GLYSTR	Glyceria striata	Glyceria striata	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
HACVIR	Hackelia virginiana	Hackelia virginiana	Beggar's-Lice	0	FACU	FACU	1	Forb	Biennial	Native
HELAUT	Helenium autumnale	Helenium autumnale	Fall Sneezeweed	5	FACW	FACW	-1	Forb	Perennial	Native
HELGRO	Helianthus grosseserratus	Helianthus grosseserratus	Saw-Tooth Sunflower	2	FACW	FACW	-1	Forb	Perennial	Native
HELTUB	Helianthus tuberosus	Helianthus tuberosus	Jerusalem-Artichoke	3	FACU	FACU	1	Forb	Perennial	Native
HELHEL	Heliopsis helianthoides	Heliopsis helianthoides	Smooth Oxeye	5	FACU	FACU	1	Forb	Perennial	Native
HERMAX	Heracleum maximum	Heracleum maximum	American Cow-Parsnip	5	FACW	FACW	-1	Forb	Perennial	Native
HIECAE	Hieracium caespitosum	HIERACIUM CAESPITOSUM	Field Hawkweed	0	UPL	UPL	2	Forb	Perennial	Adventive
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Adventive
IMPCAP	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
IRIVIR	Iris virginica var. shrevei	Iris virginica shrevei	Virginia Blueflag	5	OBL	OBL	-2	Forb	Perennial	Native
JUGNIG	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	FACU	1	Tree	Perennial	Native
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	4	FACW	FACW	-1	Forb	Perennial	Native
JUNINT	Juncus interior	Juncus interior	Inland Rush	6	FAC	FAC	0	Forb	Perennial	Native
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	4	FACW	FACW	-1	Forb	Perennial	Native
LACBIE	Lactuca biennis	Lactuca biennis	Wild Blue Lettuce	4	FAC	FAC	0	Forb	Biennial	Native
LACSER	Lactuca serriola	LACTUCA SERRIOLA	Prickly Lettuce	0	FACU	FACU	1	Forb	Biennial	Adventive
LEEORY	Leersia oryzoides	Leersia oryzoides	Rice Cut Grass	4	OBL	OBL	-2	Grass	Perennial	Native
LEOCAR	Leonurus cardiaca	LEONURUS CARDIACA	Motherwort	0	UPL	UPL	2	Forb	Perennial	Adventive
LEPVIR	Lepidium virginicum	Lepidium virginicum	Poorman's-Pepperwort	0	FACU	FACU	1	Forb	Annual	Native
LOBSIP	Lobelia siphilitica	Lobelia siphilitica	Great Blue Lobelia	6	OBL	FACW	-2	Forb	Perennial	Native
LONMAA	Lonicera maackii	LONICERA MAACKII	Amur Honeysuckle	0	UPL	UPL	2	Shrub	Perennial	Adventive
LONTAT	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1	Shrub	Perennial	Adventive
LOTCOR	Lotus corniculatus	LOTUS CORNICULATUS	Garden Bird's-Foot-Trefoil	0	FACU	FACU	1	Forb	Perennial	Adventive
LYCAME	Lycopus americanus	Lycopus americanus	Cut-Leaf Water-Horehound	5	OBL	OBL	-2	Forb	Perennial	Native

LYSCIL	Lysimachia ciliata	Lysimachia ciliata	Fringed Yellow-Loosestrife	4	FACW	FACW	-1	Forb	Perennial	Native
SMIRAC	Maianthemum racemosum	Smilacina racemosa	False Solomon's-Seal	3	FACU	FACU	1	Forb	Perennial	Native
MALPUM	Malus pumila	MALUS PUMILA	Apple	0	UPL	UPL	2	Tree	Perennial	Adventive
MALSIE	Malus toringa	MALUS SIEBOLDII	Japanese Crab Apple	0	UPL	UPL	2	Tree	Perennial	Adventive
MEDLUP	Medicago lupulina	MEDICAGO LUPULINA	Black Medick	0	FACU	FACU	1	Forb	Annual	Adventive
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	UPL	2	Forb	Biennial	Adventive
MELLOF	Melilotus officinalis	MELILOTUS ALBA	Yellow Sweet-Clover	0	FACU	FACU	1	Forb	Biennial	Adventive
MONFIS	Monarda fistulosa	Monarda fistulosa	Oswego-Tea	4	FACU	FACU	1	Forb	Perennial	Native
MORALB	Morus alba	MORUS ALBA	White Mulberry	0	FAC	FACU	0	Tree	Perennial	Adventive
MUHFRO	Muhlenbergia frondosa	Muhlenbergia frondosa	Wire-Stem Muhly	3	FACW	FACW	-1	Grass	Perennial	Native
MUHMEX	Muhlenbergia mexicana	Muhlenbergia mexicana	Mexican Muhly	5	FACW	FACW	-1	Grass	Perennial	Native
PREALB	Nabalus albus	Prenanthes alba	White Rattlesnake-Root	5	FACU	FACU	1	Forb	Perennial	Native
NEPCAT	Nepeta cataria	NEPETA CATARIA	Catnip	0	FACU	FACU	1	Forb	Perennial	Adventive
OENBIE	Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	FACU	1	Forb	Biennial	Native
OSTVIR	Ostrya virginiana	Ostrya virginiana	Eastern Hop-Hornbeam	5	FACU	FACU	1	Tree	Perennial	Native
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	FACU	1	Forb	Perennial	Native
SENAUR	Packera aurea	Senecio aureus	Golden Groundsel	7	FACW	FACW	-1	Forb	Perennial	Native
PANCAP	Panicum capillare	Panicum capillare	Common Panic Grass	1	FAC	FAC	0	Grass	Annual	Native
PANDIC	Panicum dichotomiflorum	Panicum dichotomiflorum	Fall Panic Grass	0	FACW	FACW	-1	Grass	Annual	Native
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	5	FAC	FAC	0	Grass	Perennial	Native
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	FACU	1	Vine	Perennial	Native
PENDIG	Penstemon digitalis	Penstemon digitalis	Foxglove Beardtongue	4	FAC	FAC	0	Forb	Perennial	Native
PERHYR	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	OBL	-2	Forb	Annual	Native
POLLAP	Persicaria lapathifolia	Polygonum lapathifolium; POLYGONUM SCABRUM	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native
POLPER	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive
POLPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native
POLVIR	Persicaria virginiana	Polygonum virginianum	Jumpseed	2	FAC	FAC	0	Forb	Perennial	Native

PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
PHLPRA	Phleum pratense	PHLEUM PRATENSE	Common Timothy	0	FACU	FACU	1	Grass	Perennial	Adventive
PHRAUSM	Phragmites australis ssp. americanus	Phragmites australis	Common Reed	1	FACW	FACW	-1	Grass	Perennial	Native
PHYHET	Physalis heterophylla	Physalis heterophylla	Clammy Ground-Cherry	3	UPL	UPL	2	Forb	Perennial	Native
PILPUM	Pilea pumila	Pilea pumila	Canadian Clearweed	5	FACW	FACW	-1	Forb	Annual	Native
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	FACU	1	Forb	Perennial	Adventive
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	FAC	0	Forb	Annual	Native
PLAOCC	Platanus occidentalis	Platanus occidentalis	American Sycamore	9	FACW	FACW	-1	Tree	Perennial	Native
POACOM	Poa compressa	POA COMPRESSA	Flat-Stem Blue Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adventive
POLAVI	Polygonum aviculare	POLYGONUM AVICULARE	Yard Knotweed	0	FAC	FACU	0	Forb	Annual	Adventive
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	FAC	0	Tree	Perennial	Native
POTNOR	Potentilla norvegica	Potentilla norvegica	Norwegian Cinquefoil	0	FAC	FAC	0	Forb	Annual	Native
PRUVULL	Prunella vulgaris ssp. lanceolata	Prunella vulgaris lanceolata	Common Selfheal	0	FAC	FAC	0	Forb	Perennial	Native
PRUAME	Prunus americana	Prunus americana	American Plum	5	UPL	UPL	2	Tree	Perennial	Native
PRUSER	Prunus serotina	Prunus serotina	Black Cherry	1	FACU	FACU	1	Tree	Perennial	Native
PTETRI	Ptelea trifoliata	Ptelea trifoliata	Common Hoptree	7	FACU	FACU	1	Shrub	Perennial	Native
PYCTEN	Pycnanthemum tenuifolium	Pycnanthemum tenuifolium	Narrow-Leaf Mountain-Mint	7	FAC	FAC	0	Forb	Perennial	Native
PYCVIR	Pycnanthemum virginianum	Pycnanthemum virginianum	Virginia Mountain-Mint	5	FACW	FACW	-1	Forb	Perennial	Native
QUEALB	Quercus alba	Quercus alba	Northern White Oak	5	FACU	FACU	1	Tree	Perennial	Native
QUEBIC	Quercus bicolor	Quercus bicolor	Swamp White Oak	6	FACW	FACW	-1	Tree	Perennial	Native
QUECOC	Quercus coccinea	Quercus coccinea	Scarlet Oak	4	UPL	UPL	2	Tree	Perennial	Native
QUEELL	Quercus ellipsoidalis	0	Hill's Oak	4	UPL	UPL	2	Tree	Perennial	Native
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	FACU	0	Tree	Perennial	Native
QUERUB	Quercus rubra	Quercus rubra	Northern Red Oak	7	FACU	FACU	1	Tree	Perennial	Native
QUEVEL	Quercus velutina	Quercus velutina	Black Oak	6	UPL	UPL	2	Tree	Perennial	Native
RANABO	Ranunculus abortivus	Ranunculus abortivus	Kidney-Leaf Buttercup	0	FACW	FAC	-1	Forb	Annual	Native
RATPIN	Ratibida pinnata	Ratibida pinnata	Yellow Coneflower	4	UPL	UPL	2	Forb	Perennial	Native
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
RHUGLA	Rhus glabra	Rhus glabra	Smooth Sumac	1	UPL	UPL	2	Shrub	Perennial	Native

RIBAME	Ribes americanum	Ribes americanum	Wild Black Currant	7	FACW	FACW	-1	Shrub	Perennial	Native
ROBPSE	Robinia pseudoacacia	ROBINIA PSEUDOACACIA	Black Locust	0	FACU	FACU	1	Tree	Perennial	Adventive
RORPAL	Rorippa palustris	0	Bog Yellowcress	4	OBL	OBL	-2	Forb	Perennial	Native
ROSMUL	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	FACU	1	Shrub	Perennial	Adventive
ROSSET	Rosa setigera	Rosa setigera	Climbing Rose	7	FACU	FACU	1	Shrub	Perennial	Native
RUBALL	Rubus allegheniensis	Rubus allegheniensis	Allegheny Blackberry	3	FACU	FACU	1	Shrub	Perennial	Native
RUBOCC	Rubus occidentalis	Rubus occidentalis	Black Raspberry	2	UPL	UPL	2	Shrub	Perennial	Native
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	FACU	1	Forb	Perennial	Native
RUDLAC	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	FACW	-1	Forb	Perennial	Native
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	FACU	1	Forb	Perennial	Native
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	FACU	1	Forb	Annual	Native
RUMALT	Rumex altissimus	Rumex altissimus	Pale Dock	2	FACW	FACW	-1	Forb	Perennial	Native
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive
SALBAB	Salix babylonica	SALIX BABYLONICA	Chinese Willow	0	FAC	FACW	0	Tree	Perennial	Adventive
SALDIS	Salix discolor	Salix discolor	Pussy Willow	2	FACW	FACW	-1	Shrub	Perennial	Native
SALINT	Salix interior	Salix interior	Sandbar Willow	1	FACW	FACW	-1	Shrub	Perennial	Native
SALGLA	Salix myricoides	Salix glaucophylloides	Bayberry Willow	7	FACW	FACW	-1	Shrub	Perennial	Native
SALNIG	Salix nigra	Salix nigra	Black Willow	4	OBL	OBL	-2	Tree	Perennial	Native
SAMCAN	Sambucus nigra ssp. canadensis	Sambucus canadensis	Black Elder	1	FACW	FACW	-1	Shrub	Perennial	Native
SANGRE	Sanicula odorata	Sanicula gregaria	Clustered Black-Snakeroot	2	FAC	FAC	0	Forb	Perennial	Native
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	FACU	1	Grass	Perennial	Adventive
SCHSCO	Schizachyrium scoparium	Andropogon scoparius	Little False Bluestem	5	FACU	FACU	1	Grass	Perennial	Native
SCIPUN	Schoenoplectus pungens	Scirpus pungens	Three-Square	5	OBL	OBL	-2	Sedge	Perennial	Native
SCIATC	Scirpus atrocinctus	0	Black-Girdle Bulrush	6	OBL	OBL	-2	Sedge	Perennial	Native
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OBL	OBL	-2	Sedge	Perennial	Native
CORVAR	Securigera varia	CORONILLA VARIA	Crown Vetch	0	UPL	UPL	2	Forb	Perennial	Adventive
EREHIE	Senecio hieraciifolius	Erechtites hieracifolia	American Burnweed	2	FAC	FACU	0	Forb	Annual	Native
SETFAB	Setaria faberi	SETARIA FABERI	Japanese Bristle Grass	0	FACU	FACU	1	Grass	Annual	Adventive
SETGLA	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive
SILDIC	Silene dichotoma	SILENE DICHOTOMA	Forked Catchfly	0	UPL	UPL	2	Forb	Annual	Adventive

SILINT	Silphium integrifolium	Silphium integrifolium deamii	Entire-Leaf Rosinweed	5	UPL	FAC	2	Forb	Perennial	Native
SILLAC	Silphium laciniatum	Silphium laciniatum	Compass-Plant	5	UPL	UPL	2	Forb	Perennial	Native
SILPER	Silphium perfoliatum	Silphium perfoliatum	Cup-Plant	5	FACW	FACW	-1	Forb	Perennial	Native
SILTER	Silphium terebinthinaceum	Silphium terebinthinaceum	Prairie Dock	5	FAC	FAC	0	Forb	Perennial	Native
SISALB	Sisyrinchium albidum	Sisyrinchium albidum	White Blue-Eyed-Grass	7	FACU	FACU	1	Forb	Perennial	Native
SIUSUA	Sium suave	Sium suave	Hemlock Water-Parsnip	7	OBL	OBL	-2	Forb	Perennial	Native
SMILAS	Smilax lasioneuron	Smilax lasioneura	Common Carrion Flower	5	UPL	UPL	2	Vine	Perennial	Native
SOLALT	Solidago altissima	Solidago altissima	Tall Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1	Forb	Perennial	Native
SOLRIG	Solidago rigida	Solidago rigida	Hard-Leaf Flat-Top-Goldenrod	4	FACU	FACU	1	Forb	Perennial	Native
SONARV	Sonchus arvensis	SONCHUS ARVENSIS	Field Sow-Thistle	0	FACU	FACU	1	Forb	Perennial	Adventive
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	FACU	1	Grass	Perennial	Native
SPAEUR	Sparganium eurycarpum	Sparganium eurycarpum	Broad-Fruit Burr-Reed	6	OBL	OBL	-2	Forb	Perennial	Native
SPAPEC	Spartina pectinata	Spartina pectinata	Freshwater Cord Grass	4	FACW	FACW	-1	Grass	Perennial	Native
SPOASP	Sporobolus compositus	SPOROBOLUS ASPER	Head-Like Dropseed	0	UPL	UPL	2	Grass	Perennial	Adventive
SPOHET	Sporobolus heterolepis	Sporobolus heterolepis	Prairie Dropseed	10	FACU	FACU	1	Grass	Perennial	Native
SPOVAG	Sporobolus vaginiflorus	Sporobolus vaginiflorus	Poverty Dropseed	0	UPL	UPL	2	Grass	Annual	Native
STEMED	Stellaria media	STELLARIA MEDIA	Common Chickweed	0	FACU	FACU	1	Forb	Annual	Adventive
ASTSAGD	Symphyotrichum drummondii	Aster sagittifolius drummondii	Drummond's Aster	2	UPL	UPL	2	Forb	Perennial	Native
ASTLAE	Symphyotrichum laeve	Aster laevis	Smooth Blue American-Aster	9	FACU	FACU	1	Forb	Perennial	Native
ASTSIM	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3	FAC	FACW	0	Forb	Perennial	Native
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	FAC	-1	Forb	Perennial	Native
ASTNOV	Symphyotrichum novae-angliae	Aster novae-angliae	New England American-Aster	4	FACW	FACW	-1	Forb	Perennial	Native
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	FACU	1	Forb	Perennial	Native

ASTPUN	Symphyotrichum puniceum	Aster puniceus; Aster puniceus firmus	Purple-Stem American-Aster	7	OBL	OBL	-2	Forb	Perennial	Native
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	FACU	1	Forb	Perennial	Adventive
RHURAD	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	FAC	0	Vine	Perennial	Native
TRAOHI	Tradescantia ohiensis	Tradescantia ohiensis	Bluejacket	2	FACU	FACU	1	Forb	Perennial	Native
TRIHYB	Trifolium hybridum	TRIFOLIUM HYBRIDUM	Alsike Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIPER	Triosteum perfoliatum	Triosteum perfoliatum	Late Horse Gentian	5	UPL	UPL	2	Forb	Perennial	Native
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
ULMRUB	Ulmus rubra	Ulmus rubra	Slippery Elm	4	FAC	FAC	0	Tree	Perennial	Native
URTDIO	Urtica dioica ssp. gracilis	Urtica procera	Tall Nettle	2	FACW	FAC	-1	Forb	Perennial	Native
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy	4	FACW	FACW	-1	Forb	Perennial	Native
VERSTR	Verbena stricta	Verbena stricta	Hoary Vervain	4	UPL	UPL	2	Forb	Perennial	Native
VERURT	Verbena urticifolia	Verbena urticifolia leiocarpa	White Vervain	5	FAC	FAC	0	Forb	Perennial	Native
ACTALT	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	FACW	-1	Forb	Perennial	Native
VERFAS	Vernonia fasciculata	Vernonia fasciculata	Prairie Ironweed	5	FACW	FACW	-1	Forb	Perennial	Native
VERANA	Veronica anagallis-aquatica	Veronica comosa	Blue Water Speedwell	10	OBL	OBL	-2	Forb	Perennial	Native
VERPES	Veronica persica	VERONICA PERSICA	Bird’s-Eye Speedwell	0	UPL	UPL	2	Forb	Annual	Adventive
VIBLEN	Viburnum lentago	Viburnum lentago	Nanny-Berry	5	FAC	FAC	0	Shrub	Perennial	Native
VIBPRU	Viburnum prunifolium	Viburnum prunifolium	Smooth Blackhaw	5	FACU	FACU	1	Shrub	Perennial	Native
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native
VITRIP	Vitis riparia	Vitis riparia	River-Bank Grape	2	FACW	FAC	-1	Vine	Perennial	Native
XANSTR	Xanthium strumarium	XANTHIUM STRUMARIUM	Rough Cockleburr	0	FAC	FAC	0	Forb	Annual	Adventive
XANAME	Zanthoxylum americanum	Xanthoxylum americanum	Toothachetree	3	FACU	FACU	1	Shrub	Perennial	Native
ZIZAUR	Zizia aurea	Zizia aurea	Golden Alexanders	7	FAC	FAC	0	Forb	Perennial	Native

SITE: WCERT
LOCALE: Reach 5E
BY: MO, BS, CC, KC, WO
NOTES: 6/6/2017 & 9/15/17

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.19	SPECIES RICHNESS (ALL)	162
MEAN C (ALL SPECIES)	2.17	SPECIES RICHNESS (NATIVE)	110
MEAN C (NATIVE TREES)	2.75	% NON-NATIVE	0.32
MEAN C (NATIVE SHRUBS)	2.63	WET INDICATOR (ALL)	0.26
MEAN C (NATIVE HERBACEOUS)	3.30	WET INDICATOR (NATIVE)	-0.05
FQAI (NATIVE SPECIES)	33.47	% HYDROPHYTE (MIDWEST)	0.51
FQAI (ALL SPECIES)	27.58	% NATIVE PERENNIAL	0.58
ADJUSTED FQAI	26.29	% NATIVE ANNUAL	0.07
% C VALUE 0	0.43	% ANNUAL	0.14
% C VALUE 1-3	0.25	% PERENNIAL	0.77
% C VALUE 4-6	0.27		
% C VALUE 7-10	0.06		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
ACARHO	Acalypha rhomboidea	Acalypha rhomboidea	Common Three-Seed-Mercury	0	FACU	FACU	1	Forb	Annual	Native
ACENEG	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
ACHMIL	Achillea millefolium	ACHILLEA MILLEFOLIUM	Common Yarrow	0	FACU	FACU	1	Forb	Perennial	Adventive
AGASCR	Agastache scrophulariaefolia	Agastache scrophulariaefolia	Purple Giant Hyssop	5	UPL	UPL	2	Forb	Perennial	Native
EUPRUG	Ageratina altissima	Eupatorium rugosum	White Snakeroot	4	FACU	FACU	1	Forb	Perennial	Native
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
ALLPET	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native
AMBTRI	Ambrosia trifida	Ambrosia trifida	Great Ragweed	0	FAC	FAC	0	Forb	Annual	Native
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	FACU	0	Grass	Perennial	Native
ANECAN	Anemone canadensis	Anemone canadensis	Round-Leaf Thimbleweed	4	FACW	FACW	-1	Forb	Perennial	Native

ANECYL	Anemone cylindrica	Anemone cylindrica	Thimbleweed	6	UPL	UPL	2	Forb	Perennial	Native
ANEVIR	Anemone virginiana	Anemone virginiana	Tall Thimbleweed	5	FACU	FACU	1	Forb	Perennial	Native
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native
ARCMIN	Arctium minus	ARCTIUM MINUS	Lesser Burrdock	0	FACU	FACU	1	Forb	Biennial	Adventive
ARTVUL	Artemisia vulgaris	ARTEMISIA VULGARIS	Common Mugwort	0	UPL	UPL	2	Forb	Perennial	Adventive
ASCINC	Asclepias incarnata	Asclepias incarnata	Swamp Milkweed	4	OBL	OBL	-2	Forb	Perennial	Native
ASCSYR	Asclepias syriaca	Asclepias syriaca	Common Milkweed	0	FACU	UPL	1	Forb	Perennial	Native
ASCVIR	Asclepias viridiflora	Asclepias viridiflora	Green Milkweed	10	UPL	UPL	2	Forb	Perennial	Native
BARVUL	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket	0	FAC	FAC	0	Forb	Biennial	Adventive
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	FACW	-1	Forb	Annual	Native
BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	UPL	1	Grass	Perennial	Adventive
BROLAT	Bromus latiglumis	Bromus latiglumis	Early-Leaf Brome	5	FACW	FACW	-1	Grass	Perennial	Native
BROTEC	Bromus tectorum	BROMUS TECTORUM	Downy Chess	0	UPL	UPL	2	Grass	Annual	Adventive
CALCAN	Calamagrostis canadensis	Calamagrostis canadensis	Bluejoint	3	OBL	OBL	-2	Grass	Perennial	Native
CONSEP	Calystegia sepium	Convolvulus sepium	Hedge False Bindweed	1	FAC	FAC	0	Forb	Perennial	Native
CARNUT	Carduus nutans	CARDUUS NUTANS	Nodding Plumeless-Thistle	0	FACU	FACU	1	Forb	Biennial	Adventive
CXBLAN	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	FAC	0	Sedge	Perennial	Native
CXCEPH	Carex cephalophora	Carex cephalophora	Oval-Leaf Sedge	3	FACU	FACU	1	Sedge	Perennial	Native
CXCRIS	Carex cristatella	Carex cristatella	Crested Sedge	4	FACW	FACW	-1	Sedge	Perennial	Native
CXLACU	Carex lacustris	Carex lacustris	Lakebank Sedge	6	OBL	OBL	-2	Sedge	Perennial	Native
CXSCOP	Carex scoparia	Carex scoparia	Pointed Broom Sedge	7	FACW	FACW	-1	Sedge	Perennial	Native
CXTENE	Carex tenera	Carex tenera	Quill Sedge	8	FACW	FAC	-1	Sedge	Perennial	Native
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
CIRDIS	Cirsium discolor	Cirsium discolor	Field Thistle	2	FACU	UPL	1	Forb	Biennial	Native
CIRVUL	Cirsium vulgare	CIRSIUM VULGARE	Bull Thistle	0	FACU	FACU	1	Forb	Biennial	Adventive
CONARV	Convolvulus arvensis	CONVOLVULUS ARVENSIS	Field Bindweed	0	UPL	UPL	2	Forb	Perennial	Adventive
CORSTO	Cornus alba	Cornus stolonifera	Red Osier	6	FACW	FACW	-1	Shrub	Perennial	Native
COROBL	Cornus obliqua	Cornus obliqua	Pale Dogwood	6	FACW	FACW	-1	Shrub	Perennial	Native
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
DACGLO	Dactylis glomerata	DACTYLIS GLOMERATA	Orchard Grass	0	FACU	FACU	1	Grass	Perennial	Adventive

DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne's Lace	0	UPL	UPL	2	Forb	Biennial	Adventive
ELAANG	Elaeagnus angustifolia	ELAEAGNUS ANGUSTIFOLIA	Russian-Olive	0	FACU	FACU	1	Shrub	Perennial	Adventive
ELEERY	Eleocharis palustris	Eleocharis erythropoda; Eleocharis palustris major; Eleocharis smallii	Common Spike-Rush	2	OBL	OBL	-2	Sedge	Perennial	Native
ELYCAN	Elymus canadensis	Elymus canadensis	Nodding Wild Rye	4	FACU	FACU	1	Grass	Perennial	Native
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	FACW	-1	Grass	Perennial	Native
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	FACU	1	Forb	Biennial	Native
ERIVIL	Eriochloa villosa	ERIOCHLOA VILLOSA	Chinese Cup Grass	0	UPL	UPL	2	Grass	Annual	Adventive
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	UPL	2	Forb	Perennial	Native
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native
EUPMAC	Eutrochium maculatum	Eupatorium maculatum	Spotted Trumpetweed	4	OBL	OBL	-2	Forb	Perennial	Native
FRAVIR	Fragaria virginiana	Fragaria virginiana	Virginia Strawberry	1	FACU	FACU	1	Forb	Perennial	Native
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	FACW	-1	Tree	Perennial	Native
GALAPA	Galium aparine	Galium aparine	Sticky-Willy	1	FACU	FACU	1	Forb	Annual	Native
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
HACVIR	Hackelia virginiana	Hackelia virginiana	Beggar's-Lice	0	FACU	FACU	1	Forb	Biennial	Native
HELHEL	Heliopsis helianthoides	Heliopsis helianthoides	Smooth Oxeye	5	FACU	FACU	1	Forb	Perennial	Native
HIECAE	Hieracium caespitosum	HIERACIUM CAESPITOSUM	Field Hawkweed	0	UPL	UPL	2	Forb	Perennial	Adventive
IRIVIR	Iris virginica var. shrevei	Iris virginica shrevei	Virginia Blueflag	5	OBL	OBL	-2	Forb	Perennial	Native
JUGNIG	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	FACU	1	Tree	Perennial	Native
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	4	FACW	FACW	-1	Forb	Perennial	Native
JUNEFF	Juncus effusus ssp. solutus	Juncus effusus	Lamp Rush	7	OBL	OBL	-2	Forb	Perennial	Native
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native
LACSER	Lactuca serriola	LACTUCA SERRIOLA	Prickly Lettuce	0	FACU	FACU	1	Forb	Biennial	Adventive
LEEVIR	Leersia virginica	Leersia virginica	White Grass	7	FACW	FACW	-1	Grass	Perennial	Native
CHRLEU	Leucanthemum vulgare	CHRYSANTHEMUM LEUCANTHEMUM PINNATIFIDUM	Ox-Eye Daisy	0	UPL	UPL	2	Forb	Perennial	Adventive

LOBSIP	Lobelia siphilitica	Lobelia siphilitica	Great Blue Lobelia	6	OBL	FACW	-2	Forb	Perennial	Native
LONMAA	Lonicera maackii	LONICERA MAACKII	Amur Honeysuckle	0	UPL	UPL	2	Shrub	Perennial	Adventive
LONTAT	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1	Shrub	Perennial	Adventive
LYSCIL	Lysimachia ciliata	Lysimachia ciliata	Fringed Yellow-Loosestrife	4	FACW	FACW	-1	Forb	Perennial	Native
LYSNUM	Lysimachia nummularia	LYSIMACHIA NUMMULARIA	Creeping-Jenny	0	FACW	FACW	-1	Forb	Perennial	Adventive
MEDLUP	Medicago lupulina	MEDICAGO LUPULINA	Black Medick	0	FACU	FACU	1	Forb	Annual	Adventive
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	UPL	2	Forb	Biennial	Adventive
MELLOF	Melilotus officinalis	MELILOTUS ALBA	Yellow Sweet-Clover	0	FACU	FACU	1	Forb	Biennial	Adventive
MONFIS	Monarda fistulosa	Monarda fistulosa	Oswego-Tea	4	FACU	FACU	1	Forb	Perennial	Native
MORALB	Morus alba	MORUS ALBA	White Mulberry	0	FAC	FACU	0	Tree	Perennial	Adventive
MUHFRO	Muhlenbergia frondosa	Muhlenbergia frondosa	Wire-Stem Muhly	3	FACW	FACW	-1	Grass	Perennial	Native
MUHSCH	Muhlenbergia schreberi	Muhlenbergia schreberi	Nimblewill	0	FAC	FAC	0	Grass	Perennial	Native
NEPCAT	Nepeta cataria	NEPETA CATARIA	Catnip	0	FACU	FACU	1	Forb	Perennial	Adventive
OENBIE	Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	FACU	1	Forb	Biennial	Native
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	FACU	1	Forb	Perennial	Native
PANCAP	Panicum capillare	Panicum capillare	Common Panic Grass	1	FAC	FAC	0	Grass	Annual	Native
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	5	FAC	FAC	0	Grass	Perennial	Native
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	FACU	1	Vine	Perennial	Native
PENDIG	Penstemon digitalis	Penstemon digitalis	Foxglove Beardtongue	4	FAC	FAC	0	Forb	Perennial	Native
PERHYR	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	OBL	-2	Forb	Annual	Native
POLPER	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
PHYGRI	Physalis grisea	PHYSALIS PRUINOSA	Ground-Cherry	0	UPL	UPL	2	Forb	Annual	Adventive
PHYHET	Physalis heterophylla	Physalis heterophylla	Clammy Ground-Cherry	3	UPL	UPL	2	Forb	Perennial	Native
PILPUM	Pilea pumila	Pilea pumila	Canadian Clearweed	5	FACW	FACW	-1	Forb	Annual	Native
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	FACU	1	Forb	Perennial	Adventive
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	FAC	0	Forb	Annual	Native
POACOM	Poa compressa	POA COMPRESSA	Flat-Stem Blue Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adventive

PODPEL	Podophyllum peltatum	Podophyllum peltatum	May-Apple	4	FACU	FACU	1	Forb	Perennial	Native
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	FAC	0	Tree	Perennial	Native
POTNOR	Potentilla norvegica	Potentilla norvegica	Norwegian Cinquefoil	0	FAC	FAC	0	Forb	Annual	Native
PRUVULL	Prunella vulgaris ssp. lanceolata	Prunella vulgaris lanceolata	Common Selfheal	0	FAC	FAC	0	Forb	Perennial	Native
PRUAME	Prunus americana	Prunus americana	American Plum	5	UPL	UPL	2	Tree	Perennial	Native
PRUSER	Prunus serotina	Prunus serotina	Black Cherry	1	FACU	FACU	1	Tree	Perennial	Native
PYCVIR	Pycnanthemum virginianum	Pycnanthemum virginianum	Virginia Mountain-Mint	5	FACW	FACW	-1	Forb	Perennial	Native
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	FACU	0	Tree	Perennial	Native
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
RHUGLA	Rhus glabra	Rhus glabra	Smooth Sumac	1	UPL	UPL	2	Shrub	Perennial	Native
RORPAL	Rorippa palustris		0 Bog Yellowcress	4	OBL	OBL	-2	Forb	Perennial	Native
ROSMUL	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	FACU	1	Shrub	Perennial	Adventive
RUBALL	Rubus allegheniensis	Rubus allegheniensis	Allegheny Blackberry	3	FACU	FACU	1	Shrub	Perennial	Native
RUBOCC	Rubus occidentalis	Rubus occidentalis	Black Raspberry	2	UPL	UPL	2	Shrub	Perennial	Native
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	FACU	1	Forb	Perennial	Native
RUDLAC	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	FACW	-1	Forb	Perennial	Native
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	FACU	1	Forb	Perennial	Native
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	FACU	1	Forb	Annual	Native
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive
SAGLAT	Sagittaria latifolia	Sagittaria latifolia	Duck-Potato	4	OBL	OBL	-2	Forb	Perennial	Native
SALINT	Salix interior	Salix interior	Sandbar Willow	1	FACW	FACW	-1	Shrub	Perennial	Native
SAMCAN	Sambucus nigra ssp. canadensis	Sambucus canadensis	Black Elder	1	FACW	FACW	-1	Shrub	Perennial	Native
SANGRE	Sanicula odorata	Sanicula gregaria	Clustered Black-Snakeroot	2	FAC	FAC	0	Forb	Perennial	Native
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	FACU	1	Grass	Perennial	Adventive
SCHSCO	Schizachyrium scoparium	Andropogon scoparius	Little False Bluestem	5	FACU	FACU	1	Grass	Perennial	Native
SCIVAL	Schoenoplectus tabernaemontani	Scirpus validus creber	Soft-Stem Club-Rush	5	OBL	OBL	-2	Sedge	Perennial	Native
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OBL	OBL	-2	Sedge	Perennial	Native
EREHIE	Senecio hieraciifolius	Erechtites hieracifolia	American Burnweed	2	FAC	FACU	0	Forb	Annual	Native
SETFAB	Setaria faberi	SETARIA FABERI	Japanese Bristle Grass	0	FACU	FACU	1	Grass	Annual	Adventive

SETGLA	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive
SILINT	Silphium integrifolium	Silphium integrifolium deamii	Entire-Leaf Rosinweed	5	UPL	FAC	2	Forb	Perennial	Native
SIUSUA	Sium suave	Sium suave	Hemlock Water-Parsnip	7	OBL	OBL	-2	Forb	Perennial	Native
SMILAS	Smilax lasioneuron	Smilax lasioneura	Common Carrion Flower	5	UPL	UPL	2	Vine	Perennial	Native
SOLDUL	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade	0	FAC	FAC	0	Vine	Perennial	Adventive
SOLALT	Solidago altissima	Solidago altissima	Tall Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1	Forb	Perennial	Native
SONARV	Sonchus arvensis	SONCHUS ARVENSIS	Field Sow-Thistle	0	FACU	FACU	1	Forb	Perennial	Adventive
SONASP	Sonchus asper	SONCHUS ASPER	Spiny-Leaf Sow-Thistle	0	FACU	FACU	1	Forb	Annual	Adventive
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	FACU	1	Grass	Perennial	Native
SPAPEC	Spartina pectinata	Spartina pectinata	Freshwater Cord Grass	4	FACW	FACW	-1	Grass	Perennial	Native
STEMED	Stellaria media	STELLARIA MEDIA	Common Chickweed	0	FACU	FACU	1	Forb	Annual	Adventive
ASTSAGD	Symphyotrichum drummondii	Aster sagittifolius drummondii	Drummond's Aster	2	UPL	UPL	2	Forb	Perennial	Native
ASTSIM	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3	FAC	FACW	0	Forb	Perennial	Native
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer White	4	FACW	FAC	-1	Forb	Perennial	Native
ASTPIL	Symphyotrichum pilosum	Aster pilosus	Oldfield American-Aster	0	FACU	FACU	1	Forb	Perennial	Native
ASTPUN	Symphyotrichum puniceum	Aster puniceus; Aster puniceus firmus	Purple-Stem American-Aster	7	OBL	OBL	-2	Forb	Perennial	Native
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	FACU	1	Forb	Perennial	Adventive
THADAS	Thalictrum dasycarpum	Thalictrum dasycarpum hypoglaucum	Purple Meadow-Rue	5	FACW	FACW	-1	Forb	Perennial	Native
RHURAD	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	FAC	0	Vine	Perennial	Native
TRAOHI	Tradescantia ohiensis	Tradescantia ohiensis	Bluejacket	2	FACU	FACU	1	Forb	Perennial	Native
TRAPRA	Tragopogon pratensis	TRAGOPOGON PRATENSIS	Common Goat's-Beard	0	UPL	UPL	2	Forb	Biennial	Adventive
TRIHYB	Trifolium hybridum	TRIFOLIUM HYBRIDUM	Alsike Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive

TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
ULMPUM	Ulmus pumila	ULMUS PUMILA	Siberian Elm	0	UPL	FACU	2	Tree	Perennial	Adventive
URTDIO	Urtica dioica ssp. gracilis	Urtica procera	Tall Nettle	2	FACW	FAC	-1	Forb	Perennial	Native
VERBLA	Verbascum blattaria	VERBASCUM BLATTARIA	White Moth Mullein	0	FACU	FACU	1	Forb	Biennial	Adventive
VERTHA	Verbascum thapsus	VERBASCUM THAPSUS	Woolly Mullein	0	UPL	UPL	2	Forb	Biennial	Adventive
VERALT	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	FACW	-1	Forb	Perennial	Native
VERVIR	Veronicastrum virginicum	Veronicastrum virginicum	Culver's-Root	7	FAC	FAC	0	Forb	Perennial	Native
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native
VITRIP	Vitis riparia	Vitis riparia	River-Bank Grape	2	FACW	FAC	-1	Vine	Perennial	Native
XANSTR	Xanthium strumarium	XANTHIUM STRUMARIUM	Rough Cockleburr	0	FAC	FAC	0	Forb	Annual	Adventive
ZIZAUR	Zizia aurea	Zizia aurea	Golden Alexanders	7	FAC	FAC	0	Forb	Perennial	Native

SITE: WCERT
LOCALE: Mack Rd.
BY: MO, WS, CC, KC, WO
NOTES: 6/7/17 & 9/14/17

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.19	SPECIES RICHNESS (ALL)	85
MEAN C (ALL SPECIES)	1.99	SPECIES RICHNESS (NATIVE)	53
MEAN C (NATIVE TREES)	3.70	% NON-NATIVE	0.38
MEAN C (NATIVE SHRUBS)	3.50	WET INDICATOR (ALL)	0.56
MEAN C (NATIVE HERBACEOUS)	3.05	WET INDICATOR (NATIVE)	0.28
FQAI (NATIVE SPECIES)	23.21	% HYDROPHYTE (MIDWEST)	0.40
FQAI (ALL SPECIES)	18.33	% NATIVE PERENNIAL	0.52
ADJUSTED FQAI	25.18	% NATIVE ANNUAL	0.08
% C VALUE 0	0.51	% ANNUAL	0.15
% C VALUE 1-3	0.19	% PERENNIAL	0.75
% C VALUE 4-6	0.25		
% C VALUE 7-10	0.06		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
EUPRUG	Ageratina altissima	Eupatorium rugosum	White Snakeroot	4	FACU	FACU	1	Forb	Perennial	Native
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
ALLPET	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native
AMBTRI	Ambrosia trifida	Ambrosia trifida	Great Ragweed	0	FAC	FAC	0	Forb	Annual	Native
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	FACU	0	Grass	Perennial	Native
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native
BARVUL	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket	0	FAC	FAC	0	Forb	Biennial	Adventive
BROJAP	Bromus arvensis	BROMUS JAPONICUS	Field Brome	0	FACU	FACU	1	Grass	Annual	Adventive
BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	UPL	1	Grass	Perennial	Adventive
BROLAT	Bromus latiglumis	Bromus latiglumis	Early-Leaf Brome	5	FACW	FACW	-1	Grass	Perennial	Native

BROTEC	Bromus tectorum	BROMUS TECTORUM	Downy Chess	0	UPL	UPL	2	Grass	Annual	Adventive
CARCOR	Carya cordiformis	Carya cordiformis	Bitter-Nut Hickory	7	FACU	FAC	1	Tree	Perennial	Native
CICINT	Cichorium intybus	CICHORIUM INTYBUS	Chicory	0	FACU	FACU	1	Forb	Perennial	Adventive
CORAME	Corylus americana	Corylus americana	American Hazelnut	5	FACU	FACU	1	Shrub	Perennial	Native
CRAMOL	Crataegus mollis	Crataegus mollis	Downy Hawthorn	2	FAC	FAC	0	Tree	Perennial	Native
DACGLO	Dactylis glomerata	DACTYLIS GLOMERATA	Orchard Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne's Lace	0	UPL	UPL	2	Forb	Biennial	Adventive
DESCAA	Desmodium canadense	Desmodium canadense	Showy Tick-Trefoil	4	FACU	FAC	1	Forb	Perennial	Native
ELAUMB	Elaeagnus umbellata	ELAEAGNUS UMBELLATA	Autumn-Olive	0	UPL	UPL	2	Shrub	Perennial	Adventive
ELYCAN	Elymus canadensis	Elymus canadensis	Nodding Wild Rye	4	FACU	FACU	1	Grass	Perennial	Native
AGRREP	Elymus repens	AGROPYRON REPENS	Creeping Wild Rye	0	FACU	FACU	1	Grass	Perennial	Adventive
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	FACW	-1	Grass	Perennial	Native
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	FACU	1	Forb	Biennial	Native
ERICAN	Erigeron canadensis	Erigeron canadensis	Canadian Horseweed	0	FACU	FACU	1	Forb	Annual	Native
ERIVIL	Eriochloa villosa	ERIOCHLOA VILLOSA	Chinese Cup Grass	0	UPL	UPL	2	Grass	Annual	Adventive
ERYYUC	Eryngium yuccifolium	Eryngium yuccifolium	Button Eryngo	9	FAC	FAC	0	Forb	Perennial	Native
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native
FESRUB	Festuca rubra	FESTUCA RUBRA	Red Fescue	0	FACU	FACU	1	Grass	Perennial	Adventive
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	FACW	-1	Tree	Perennial	Native
GALLAN	Galium lanceolatum	Galium lanceolatum	Lance-Leaf Licorice Bedstraw	10	UPL	UPL	2	Forb	Perennial	Native
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
HACVIR	Hackelia virginiana	Hackelia virginiana	Beggar's-Lice	0	FACU	FACU	1	Forb	Biennial	Native
HELGRO	Helianthus grosseserratus	Helianthus grosseserratus	Saw-Tooth Sunflower	2	FACW	FACW	-1	Forb	Perennial	Native
HELHEL	Heliopsis helianthoides	Heliopsis helianthoides	Smooth Oxeye	5	FACU	FACU	1	Forb	Perennial	Native
IMPCAP	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
JUGNIG	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	FACU	1	Tree	Perennial	Native
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native

LOBSIP	Lobelia siphilitica	Lobelia siphilitica	Great Blue Lobelia	6	OBL	FACW	-2	Forb	Perennial	Native
MEDLUP	Medicago lupulina	MEDICAGO LUPULINA	Black Medick	0	FACU	FACU	1	Forb	Annual	Adventive
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	UPL	2	Forb	Biennial	Adventive
MELLOF	Melilotus officinalis	MELILOTUS ALBA	Yellow Sweet-Clover	0	FACU	FACU	1	Forb	Biennial	Adventive
MONFIS	Monarda fistulosa	Monarda fistulosa	Oswego-Tea	4	FACU	FACU	1	Forb	Perennial	Native
MUHSCH	Muhlenbergia schreberi	Muhlenbergia schreberi	Nimblewill	0	FAC	FAC	0	Grass	Perennial	Native
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	FACU	1	Forb	Perennial	Native
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	5	FAC	FAC	0	Grass	Perennial	Native
POLAMP	Persicaria amphibia	Polygonum coccineum; Polygonum amphibium stipulaceum	Water Smartweed	4	OBL	OBL	-2	Forb	Perennial	Native
PERHYR	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	OBL	-2	Forb	Annual	Native
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	FACU	1	Forb	Perennial	Adventive
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	FAC	0	Forb	Annual	Native
POACOM	Poa compressa	POA COMPRESSA	Flat-Stem Blue Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adventive
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	FAC	0	Tree	Perennial	Native
QUECOC	Quercus coccinea	Quercus coccinea	Scarlet Oak	4	UPL	UPL	2	Tree	Perennial	Native
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	FACU	0	Tree	Perennial	Native
QUERUB	Quercus rubra	Quercus rubra	Northern Red Oak	7	FACU	FACU	1	Tree	Perennial	Native
RHUTYP	Rhus hirta	Rhus typhina	Staghorn Sumac	1	UPL	UPL	2	Tree	Perennial	Native
RUBOCC	Rubus occidentalis	Rubus occidentalis	Black Raspberry	2	UPL	UPL	2	Shrub	Perennial	Native
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	FACU	1	Forb	Perennial	Native
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	FACU	1	Forb	Perennial	Native
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	FACU	1	Forb	Annual	Native
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive
SANGRE	Sanicula odorata	Sanicula gregaria	Clustered Black-Snakeroot	2	FAC	FAC	0	Forb	Perennial	Native
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	FACU	1	Grass	Perennial	Adventive
CORVAR	Securigera varia	CORONILLA VARIA	Crown Vetch	0	UPL	UPL	2	Forb	Perennial	Adventive

SETVIR	Setaria viridis	SETARIA VIRIDIS	Green Foxtail	0	UPL	UPL	2	Grass	Annual	Adventive
SILINT	Silphium integrifolium	Silphium integrifolium deamii	Entire-Leaf Rosinweed	5	UPL	FAC	2	Forb	Perennial	Native
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SONASP	Sonchus asper	SONCHUS ASPER	Spiny-Leaf Sow-Thistle	0	FACU	FACU	1	Forb	Annual	Adventive
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	FACU	1	Grass	Perennial	Native
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	FAC	-1	Forb	Perennial	Native
ASTNOV	Symphyotrichum novae-angliae	Aster novae-angliae	New England American-Aster	4	FACW	FACW	-1	Forb	Perennial	Native
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	FACU	1	Forb	Perennial	Native
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIFLA	Tridens flavus	TRIODIA FLAVA	Purple-Top	0	UPL	UPL	2	Grass	Perennial	Adventive
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	FACU	1	Forb	Perennial	Adventive
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
ULMPUM	Ulmus pumila	ULMUS PUMILA	Siberian Elm	0	UPL	FACU	2	Tree	Perennial	Adventive
VERBLA	Verbascum blattaria	VERBASCUM BLATTARIA	White Moth Mullein	0	FACU	FACU	1	Forb	Biennial	Adventive
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy	4	FACW	FACW	-1	Forb	Perennial	Native
VERURT	Verbena urticifolia	Verbena urticifolia leiocarpa	White Vervain	5	FAC	FAC	0	Forb	Perennial	Native
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native

2017 Annual Monitoring Report

Reaches 5D, 5E, 8, and
the Mack Road Staging Area
of the Kress Creek /

West Branch DuPage River Site

Appendix C

Vascular Plant
Transect Data

SITE: WCERT
LOCALE: REACH 8A
BY: MO, BS, KC, WO
DATE: 9/15/17

TRANSECT QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS
T11-1	1.4	1.4	3.13	3.13	0	0	5	5
T12-1	1.55	1.06	5.13	4.25	0.18	0.31	11	16
T12-2	1.25	0.83	2.5	2.04	0	-0.17	4	6
T12-3	2.25	1.8	4.5	4.02	1	0.6	4	5
T12-4	1.2	0.67	2.68	2	-0.4	-0.44	5	9
T12-5	1.5	1	3.67	3	0.33	0.33	6	9
T12-6	2.17	1.63	5.31	4.6	-0.67	-0.63	6	8
T13-1	2.75	2.44	7.78	7.33	-0.5	-0.44	8	9
T13-2	4.56	4.56	13.67	13.67	-0.22	-0.22	9	9
T13-3	2.71	2.11	7.18	6.33	0	0.11	7	9
T13-4	2.25	2.25	4.5	4.5	-0.75	-0.75	4	4
T13-5	3	2.5	6.71	6.12	-1.4	-1.33	5	6
T13-6	2.75	2.75	5.5	5.5	-1.25	-1.25	4	4
T14-1	2.57	2.57	6.8	6.8	0	0	7	7
T14-2	3	3	6	6	0.25	0.25	4	4
T14-3	1	0.8	2	1.79	0.25	0.4	4	5
T14-4	2.5	2.14	6.12	5.67	-0.33	-0.14	6	7
T15-1	1.17	0.7	2.86	2.21	-0.33	-0.1	6	10
T8-3-1	3	3	6	6	0.75	0.75	4	4
T8-3-2	4.17	3.57	10.21	9.45	-0.5	-0.29	6	7
AVG	2.34	2.04	5.61	5.22	-0.18	-0.15	5.75	7.15
STD	0.97	1.05	2.79	2.84	0.59	0.55	1.92	2.91

TRANSECT SUMMARY

C	NUMBER
0	11
1	6
2	9
3	4
4	6
5	9
6	1
7	1
8	0
9	1
10	1

0:	22.45%	
1 to 3:	38.78%	
4 to 7:	34.69%	
8 to 10:	4.08%	

49	NATIVE SPECIES
64	TOTAL SPECIES
2.8	NATIVE MEAN C
2.14	W/Adventives
19.57	NATIVE FQI
17.13	W/Adventives
-0.22	NATIVE MEAN W
-0.05	W/Adventives

PHYSIOGNOMIC SUMMARY

PHYSIOGNOMY

NATIVE	49	76.56%	ADVENTIVE	15	23.44%
Tree	0	0.00%	Tree	0	0.00%
Shrub	0	0.00%	Shrub	1	1.56%
Vine	3	4.69%	Vine	0	0.00%
Forb	41	64.06%	Forb	12	18.75%

Grass	4	6.25%	Grass	2	3.13%
Sedge	1	1.56%	Sedge	0	0.00%
Fern	0	0.00%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOG	FRQ	COV	RFRQ	RCOV	RIV
N Vine	4	22	2.8	1.2	2
N Forb	101	1474	70.6	81.8	76.2
N Grass	9	72	6.3	4	5.1
N Sedge	1	3	0.7	0.2	0.4
A Shrub	1	3	0.7	0.2	0.4
A Forb	21	195	14.7	10.8	12.8
A Grass	6	32	4.2	1.8	3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME (NWPL/MOHLENBROCK)	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Rudbeckia triloba	3	FACU	9	320	6.3	17.8	12
Eupatorium serotinum	0	FAC	10	210	7	11.7	9.3
Symphyotrichum lanceolatum	3	FAC	8	135	5.6	7.5	6.5
Solidago canadensis	1	FACU	6	135	4.2	7.5	5.8
Persicaria maculosa	0	FACW	7	97	4.9	5.4	5.1
Rudbeckia subtomentosa	9	FACU	2	70	1.4	3.9	2.6
Viola sororia	3	FAC	2	65	1.4	3.6	2.5
Bidens frondosa	1	FACW	6	58	4.2	3.2	3.7
Impatiens capensis	3	FACW	1	50	0.7	2.8	1.7
Helianthus grosseserratus	2	FACW	1	40	0.7	2.2	1.5
Glechoma hederacea	0	FACU	3	40	2.1	2.2	2.2
Persicaria amphibia	4	OBL	4	32	2.8	1.8	2.3
Elymus virginicus	4	FACW	5	30	3.5	1.7	2.6
Persicaria virginiana	2	FAC	1	30	0.7	1.7	1.2
Physostegia virginiana	6	FACW	1	30	0.7	1.7	1.2
Elymus villosus	5	FACU	1	30	0.7	1.7	1.2
Silphium perfoliatum	5	FACW	2	23	1.4	1.3	1.3
Ambrosia artemisiifolia	0	FACU	3	20	2.1	1.1	1.6
Apocynum cannabinum	2	FAC	1	20	0.7	1.1	0.9
Geum canadense	1	FAC	3	18	2.1	1	1.5
Symphyotrichum lateriflorum	4	FACW	3	18	2.1	1	1.5
Oxalis stricta	0	FACU	3	17	2.1	0.9	1.5
Setaria pumila	0	FAC	4	17	2.8	0.9	1.9
Parthenocissus quinquefolia	2	FACU	2	17	1.4	0.9	1.2
Phalaris arundinacea	0	FACW	2	15	1.4	0.8	1.1
Persicaria hydropiper	2	OBL	4	13	2.8	0.7	1.8
Rudbeckia laciniata	5	FACW	3	13	2.1	0.7	1.4
Amaranthus tuberculatus	0	OBL	2	13	1.4	0.7	1.1
Plantago rugelii	0	FAC	2	10	1.4	0.6	1
Symphyotrichum pilosum	0	FACU	2	10	1.4	0.6	1
Trifolium hybridum	0	FACU	1	10	0.7	0.6	0.6
Verbena urticifolia	5	FAC	2	10	1.4	0.6	1
Rumex crispus	0	FAC	2	10	1.4	0.6	1
Panicum dichotomiflorum	0	FACW	2	10	1.4	0.6	1
Solidago gigantea	4	FACW	2	10	1.4	0.6	1
Verbesina alternifolia	5	FACW	1	10	0.7	0.6	0.6
Ambrosia trifida	0	FAC	1	10	0.7	0.6	0.6
Leonurus cardiaca	0	UPL	1	10	0.7	0.6	0.6
Sanicula odorata	2	FAC	1	10	0.7	0.6	0.6

Pycnanthemum virginianum	5	FACW	1	10	0.7	0.6	0.6
Erigeron canadensis	0	FACU	2	8	1.4	0.4	0.9
Urtica dioica ssp. gracilis	2	FACW	2	8	1.4	0.4	0.9
Pilea fontana	7	FACW	1	7	0.7	0.4	0.5
Oenothera biennis	0	FACU	1	5	0.7	0.3	0.5
Rudbeckia hirta	1	FACU	1	5	0.7	0.3	0.5
Trifolium pratense	0	FACU	1	5	0.7	0.3	0.5
Agastache scrophulariaefolia	5	UPL	1	5	0.7	0.3	0.5
Polygonum aviculare	0	FAC	1	5	0.7	0.3	0.5
Erysimum hieracifolium	0	UPL	1	5	0.7	0.3	0.5
Bidens cernua	5	OBL	1	5	0.7	0.3	0.5
Solidago altissima	1	FACU	1	5	0.7	0.3	0.5
Calystegia sepium	1	FAC	1	5	0.7	0.3	0.5
Cirsium arvense	0	FACU	1	5	0.7	0.3	0.5
Pilea pumila	5	FACW	1	5	0.7	0.3	0.5
Rhamnus cathartica	0	FAC	1	3	0.7	0.2	0.4
Carex grisea	2	FAC	1	3	0.7	0.2	0.4
Toxicodendron radicans	2	FAC	1	3	0.7	0.2	0.4
Chenopodium album	0	FACU	1	3	0.7	0.2	0.4
Verbena hastata	4	FACW	1	3	0.7	0.2	0.4
Lysimachia nummularia	0	FACW	1	3	0.7	0.2	0.4
Persicaria pensylvanica	0	FACW	1	3	0.7	0.2	0.4
Daucus carota	0	UPL	1	2	0.7	0.1	0.4
Fallopia cilinodis	10	UPL	1	2	0.7	0.1	0.4
Leersia oryzoides	4	OBL	1	2	0.7	0.1	0.4
			143	1801			

TRANSECT INVENTORY

Acronym	Scientific Name (NWPL/Mohlenbrock)	Scientific Name Synonym (Swink & Wilhelm)	Common Name (NWPL/Mohlenbrock)	C	WETNESS	WETNESS VALUE
AGASCR	Agastache scrophulariaefolia	Agastache scrophulariaefolia	Purple Giant Hyssop	5	UPL	2
AMATUB	Amaranthus tuberculatus	Acnida altissima	Rough-Fruit Amaranth	0	OBL	-2
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	1
AMBTRI	Ambrosia trifida	Ambrosia trifida	Great Ragweed	0	FAC	0
APOSIB	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	0
BIDCER	Bidens cernua	Bidens cernua	Nodding Burr-Marigold	5	OBL	-2
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	-1
CONSEP	Calystegia sepium	Convolvulus sepium	Hedge False Bindweed	1	FAC	0
CXGRIS	Carex grisea	Carex grisea	Inflated Narrow-Leaf Sedge	2	FAC	0
CHEALB	Chenopodium album	CHENOPODIUM ALBUM	Lamb's-Quarters	0	FACU	1
CIRARV	Cirsium arvense	CIRSIUM ARVENSE	Canadian Thistle	0	FACU	1
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne’s Lace	0	UPL	2
ELYVIL	Elymus villosus	Elymus villosus	Hairy Wild Rye	5	FACU	1
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	-1
ERICAN	Erigeron canadensis	Erigeron canadensis	Canadian Horseweed	0	FACU	1
ERYHIE	Erysimum hieracifolium	ERYSIMUM HIERACIIFOLIUM	Hawkweed Mustard	0	UPL	2
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	0
POLCIL	Fallopia cilinodis	Polygonum cilinode	Bristly Climbing Buckwheat	10	UPL	2
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	0
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	1
HELGRO	Helianthus	Helianthus grosseserratus	Saw-Tooth Sunflower	2	FACW	-1

	grosseserratus					
IMPCAP	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	-1
LEEORY	Leersia oryzoides	Leersia oryzoides	Rice Cut Grass	4	OBL	-2
LEOCAR	Leonurus cardiaca	LEONURUS CARDIACA	Motherwort	0	UPL	2
LYSNUM	Lysimachia nummularia	LYSIMACHIA NUMMULARIA	Creeping-Jenny	0	FACW	-1
OENBIE	Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	1
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	1
PANDIC	Panicum dichotomiflorum	Panicum dichotomiflorum	Fall Panic Grass	0	FACW	-1
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	1
POLAMP	Persicaria amphibia	Polygonum coccineum; Polygonum amphibium stipulaceum	Water Smartweed	4	OBL	-2
POLHYD	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	-2
POLPER	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	-1
POLPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	-1
POLVIR	Persicaria virginiana	Polygonum virginianum	Jumpseed	2	FAC	0
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	-1
PHYVIR	Physostegia virginiana	Physostegia virginiana	Obedient-Plant	6	FACW	-1
PILFON	Pilea fontana	Pilea fontana	Lesser Clearweed	7	FACW	-1
PILPUM	Pilea pumila	Pilea pumila	Canadian Clearweed	5	FACW	-1
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	0
POLAVI	Polygonum aviculare	POLYGONUM AVICULARE	Yard Knotweed	0	FAC	0
PYCVIR	Pycnanthemum virginianum	Pycnanthemum virginianum	Virginia Mountain-Mint	5	FACW	-1
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	0
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	1
RUDLAC	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	-1
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	1
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	1
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	0
SANGRE	Sanicula odorata	Sanicula gregaria	Clustered Black-Snakeroot	2	FAC	0
SETGLA	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	0
SILPER	Silphium perfoliatum	Silphium perfoliatum	Cup-Plant	5	FACW	-1
SOLALT	Solidago altissima	Solidago altissima	Tall Goldenrod	1	FACU	1
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	1
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	-1
ASTSIM	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3	FAC	0
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	-1
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	1
RHURAD	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	0
TRIHYB	Trifolium hybridum	TRIFOLIUM HYBRIDUM	Alsike Clover	0	FACU	1
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	1
URTDIO	Urtica dioica ssp. gracilis	Urtica procera	Tall Nettle	2	FACW	-1
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy	4	FACW	-1
VERURT	Verbena urticifolia	Verbena urticifolia leiocarpa	White Vervain	5	FAC	0
ACTALT	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	-1
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	0

TRANSECT STRING

>	
QUAD	1
SPECIES	COVER
BIDFRO	20
EUPSER	10
IMPCAP	50
OENBIE	5
RUDTRI	100
>	
QUAD	2
SPECIES	COVER
AMBART	10
ASTPIL	5
ASTSIM	5
BIDFRO	5
DAUCAR	2
ELYVIR	5
EUPSER	10
OXASTR	10
PLARUG	5
POLPER	2
RUDHIR	5
SETGLA	2
TRIHYB	10
TRIPRA	5
VERURT	5
VIOSOR	5
>	
QUAD	3
SPECIES	COVER
ASTPIL	5
EUPSER	40
PLARUG	5
POLPER	10
RUMCRI	5
SILPER	20
>	
QUAD	4
SPECIES	COVER
AGASCR	5
EUPSER	60
POLPER	25
RUDTRI	20
SOLCAN	5
>	
QUAD	5
SPECIES	COVER
AMBART	5
ASTSIM	10
BIDFRO	20
EUPSER	50
PHAARU	5
POLAVI	5
POLHYD	5
POLPER	10
RUMCRI	5

>
QUAD	6
SPECIES	COVER
AMBART	5
BIDFRO	5
ERYHIE	5
EUPSER	20
OXASTR	5
POLPER	20
RUDTRI	75
SETGLA	5
VERURT	5

>
QUAD	7
SPECIES	COVER
ASTSIM	5
BIDCER	5
EUPSER	5
PANDIC	5
POLHYD	5
POLPER	20
RUDTRI	80
SETGLA	5

>
QUAD	8
SPECIES	COVER
ELYVIR	3
ERICAN	3
GEUCAN	10
PARQUI	7
PILFON	7
POLAMP	5
POLHYD	1
POLVIR	30
RHACAT	3

>
QUAD	9
SPECIES	COVER
ASTLAT	3
CXGRIS	3
GEUCAN	5
POLAMP	5
POLCIL	2
RHURAD	3
RUDLAC	3
RUDSUB	20
SOLGIG	5

>
QUAD	10
SPECIES	COVER
BIDFRO	3
CHEALB	3
ELYVIR	10
ERICAN	5
GEUCAN	3
OXASTR	2
RUDSUB	50

SETGLA	5
VERHAS	3
>	
QUAD	11
SPECIES	COVER
HELGRO	40
POLAMP	12
SOLALT	5
URTDIO	3
>	
QUAD	12
SPECIES	COVER
ELYVIR	7
LEEORY	2
LYSNUM	3
POLHYD	2
POLPEN	3
SILPER	3
>	
QUAD	13
SPECIES	COVER
AMATUB	3
ASTSIM	5
ELYVIR	5
POLAMP	10
>	
QUAD	14
SPECIES	COVER
APOSIB	20
ASTSIM	30
EUPSER	5
RUDLAC	5
RUDTRI	5
SOLCAN	5
SOLGIG	5
>	
QUAD	15
SPECIES	COVER
ACTALT	10
ASTSIM	50
RUDTRI	10
SOLCAN	5
>	
QUAD	16
SPECIES	COVER
AMBTRI	10
ASTSIM	20
EUPSER	5
GLEHED	10
SOLCAN	75
>	
QUAD	17
SPECIES	COVER
ASTLAT	5
ASTSIM	10
BIDFRO	5
EUPSER	5

GLEHED	10
PHYVIR	30
SOLCAN	40
>	
QUAD	18
SPECIES	COVER
AMATUB	10
CIRARV	5
CONSEP	5
LEOCAR	10
PANDIC	5
PHAARU	10
POLPER	10
RUDTRI	10
SOLCAN	5
URTDIO	5
>	
QUAD	19
SPECIES	COVER
ELYVIL	30
PARQUI	10
RUDTRI	10
SANGRE	10
>	
QUAD	20
SPECIES	COVER
ASTLAT	10
GLEHED	20
PILPUM	5
PYCVIR	10
RUDLAC	5
RUDTRI	10
VIOSOR	60

SITE: WCERT
LOCALE: Reach 8b
BY: WS, CC, KC, WO
NOTES: 9/14/2017

TRANSECT QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS
T1-1	4.4	4.4	9.84	9.84	0	0	5	5
T1-10	2.57	2.57	6.8	6.8	-0.86	-0.86	7	7
T1-11	3	1.5	3	2.12	0	0	1	2
T1-2	6	6	8.49	8.49	0.5	0.5	2	2
T1-3	3.4	3.4	7.6	7.6	-0.6	-0.6	5	5
T1-4	1.4	1.27	4.43	4.22	-0.1	-0.09	10	11
T1-5	1.88	1.88	5.3	5.3	-0.13	-0.13	8	8
T1-6	2.17	2.17	5.31	5.31	-0.5	-0.5	6	6
T1-7	2.75	2.75	5.5	5.5	-1.25	-1.25	4	4
T1-8	2.5	2.5	5	5	-1.25	-1.25	4	4
T1-9	4.33	4.33	10.61	10.61	-1	-1	6	6
T2-1	2	1.67	4.47	4.08	0	0	5	6
T2-2	4.25	3.4	8.5	7.6	0.25	0.4	4	5
T2-3	3.71	2.6	9.83	8.22	0.14	0.6	7	10
T2-4	3.86	3.86	10.21	10.21	0.71	0.71	7	7
T2-5	4.57	4	12.09	11.31	0.29	0.25	7	8
T3-1	2.14	1.5	5.67	4.74	1	1.1	7	10
T3-10	3.4	2.43	7.6	6.43	1.2	1.14	5	7
T3-11	3	1.64	7.35	5.43	0.83	0.82	6	11
T3-12	2.5	1.67	3.54	2.89	1	0.67	2	3
T3-13	3	1.29	5.2	3.4	1	0.71	3	7
T3-14	4.17	4.17	10.21	10.21	1.17	1.17	6	6
T3-15	3.17	3.17	7.76	7.76	1	1	6	6
T3-16	3.25	2.17	6.5	5.31	0.5	0.83	4	6
T3-17	2.29	1.6	6.05	5.06	0.86	0.9	7	10
T3-18	2.17	1.18	5.31	3.92	0.5	0.82	6	11
T3-19	4	2.22	8.94	6.67	0.6	1	5	9
T3-2	3	2.25	9	7.79	0.67	0.75	9	12
T3-20	2.14	1.5	5.67	4.74	0.86	1.1	7	10
T3-21	2.86	2	7.56	6.32	0.29	0.4	7	10
T3-22	2.1	1.75	6.64	6.06	0.7	0.75	10	12
T3-23	2.92	2.53	10.54	9.81	-0.46	-0.33	13	15
T3-24	3.4	2.62	10.75	9.43	0.5	0.46	10	13
T3-25	3	2.25	7.35	6.36	0.5	0.5	6	8
T3-26	2.8	2.33	6.26	5.72	1.2	1	5	6
T3-27	3	1.8	5.2	4.02	1	0.8	3	5
T3-28	4.11	3.36	12.33	11.16	0.56	0.64	9	11
T3-29	3.83	3.83	9.39	9.39	1.17	1.17	6	6
T3-3	1	0.63	2.24	1.77	0.4	0.75	5	8
T3-30	3.5	2.8	7	6.26	0	0.2	4	5
T3-31	2.8	2	6.26	5.29	0.4	0.43	5	7
T3-32	3.33	2.86	8.16	7.56	0.83	0.57	6	7
T3-33	2.83	1.7	6.94	5.38	0.17	0.4	6	10
T3-34	2.71	1.58	7.18	5.48	0.71	0.67	7	12
T3-35	4	2.29	8	6.05	0.75	0.57	4	7
T3-36	3.2	2.29	7.16	6.05	0.8	1	5	7
T3-4	3	3	7.35	7.35	0.67	0.67	6	6

T3-5	3.25	1.86	6.5	4.91	1	0.86	4	7
T3-6	3.13	2.27	8.84	7.54	0.75	0.64	8	11
T3-7	1.8	1.29	4.02	3.4	0.6	0.43	5	7
T3-8	3.33	2.5	8.16	7.07	0.83	0.75	6	8
T3-9	3.83	2.3	9.39	7.27	0.67	0.9	6	10
T4-1	2.14	1.67	5.67	5	0.86	0.67	7	9
T4-10	1.57	1.22	4.16	3.67	-0.29	0	7	9
T4-11	1.2	1.2	2.68	2.68	0.8	0.8	5	5
T4-12	2.5	1.25	3.54	2.5	1	0.25	2	4
T4-13	2.2	1.57	4.92	4.16	0.8	0.86	5	7
T4-14	2.75	2.2	7.78	6.96	0.25	0.3	8	10
T4-15	3.17	2.11	7.76	6.33	-0.17	0.22	6	9
T4-16	5	3.33	10	8.16	0.75	0.5	4	6
T4-17	2.25	1.13	4.5	3.18	1.25	0.38	4	8
T4-18	3	1.88	6.71	5.3	0.8	0.5	5	8
T4-19	3	3	5.2	5.2	1.33	1.33	3	3
T4-2	2.14	1.67	5.67	5	0.86	0.67	7	9
T4-20	3	2.33	7.94	7	1	0.78	7	9
T4-21	2.8	1.75	6.26	4.95	1.2	0.63	5	8
T4-22	1.67	0.83	2.89	2.04	0.33	0.17	3	6
T4-23	1.33	0.57	2.31	1.51	1.33	1.14	3	7
T4-24	3	1.29	5.2	3.4	1	0.71	3	7
T4-25	2.25	0.75	4.5	2.6	1	0.67	4	12
T4-26	1.25	0.71	2.5	1.89	1	1	4	7
T4-27	2	1.67	4.47	4.08	1	1.17	5	6
T4-28	3.8	2.71	8.5	7.18	1	0.86	5	7
T4-29	2.5	1.36	6.12	4.52	0.5	0.55	6	11
T4-3	3.75	2.14	7.5	5.67	0.25	0.29	4	7
T4-30	2.33	1.17	5.72	4.04	0.67	0.67	6	12
T4-31	1	0.43	1.73	1.13	0.33	0.43	3	7
T4-32	1.75	1	3.5	2.65	0.5	0.43	4	7
T4-33	2.5	1	3.54	2.24	1	0.6	2	5
T4-34	4.5	2.25	6.36	4.5	1	0.25	2	4
T4-35	1.67	1	2.89	2.24	1	1.4	3	5
T4-4	3.17	2.38	7.76	6.72	0.33	0.25	6	8
T4-5	5	5	8.66	8.66	0.67	0.67	3	3
T4-6	3	2.14	6.71	5.67	0.4	0.29	5	7
T4-7	3.75	3	7.5	6.71	1.25	1	4	5
T4-8	2.5	2.5	5	5	0.5	0.5	4	4
T4-9	4	3.2	8	7.16	0.75	0.6	4	5
T5-1	3	2.7	9	8.54	-0.22	-0.2	9	10
T5-2	3.78	3.4	11.33	10.75	-0.67	-0.5	9	10
T5-3	4	4	9.8	9.8	-0.17	-0.17	6	6
T5-4	4.29	4.29	11.34	11.34	-0.29	-0.29	7	7
T5-5	4	4	8	8	-0.75	-0.75	4	4
T5-6	3.8	3.45	12.02	11.46	-0.4	-0.45	10	11
T6-1	1.25	1.11	3.54	3.33	0.38	0.44	8	9
T6-2	2.8	2.8	8.85	8.85	-0.1	-0.1	10	10
T6-3	4.5	3.6	9	8.05	0	0.4	4	5
T6-4	3.57	3.57	9.45	9.45	0.14	0.14	7	7
T6-5	2.83	2.13	6.94	6.01	1	1	6	8
T6-6	3.13	2.78	8.84	8.33	0.38	0.33	8	9
T7-1	2.1	1.91	6.64	6.33	0.5	0.64	10	11
T7-10	2.75	2	7.78	6.63	-0.38	-0.09	8	11
T7-11	3.5	2.8	7	6.26	0.25	0.4	4	5
T7-12	2.6	2.36	8.22	7.84	-0.1	-0.09	10	11
T7-13	2.67	2.18	8	7.24	-0.33	-0.27	9	11

T7-14	1.38	1.22	3.89	3.67	0	0.11	8	9
T7-2	1.83	1	4.49	3.32	0.33	0.45	6	11
T7-3	2	0.89	4	2.67	0.75	1	4	9
T7-4	2.14	1.36	5.67	4.52	0.57	0.82	7	11
T7-5	3.09	2.83	10.25	9.81	0	0.08	11	12
T7-6	2.13	2.13	6.01	6.01	0.38	0.38	8	8
T7-7	2.33	2.33	5.72	5.72	-0.5	-0.5	6	6
T7-8	3.5	2.8	9.9	8.85	-0.13	0.1	8	10
T7-9	2.13	2.13	6.01	6.01	0.38	0.38	8	8
AVG	2.91	2.27	6.86	6.06	0.43	0.42	5.84	7.76
STD	0.94	1.02	2.4	2.47	0.58	0.53	2.25	2.62

TRANSECT SUMMARY

C	NUMBER					
0	19			110	NATIVE SPECIES	
1	10			147	TOTAL SPECIES	
2	11			3.32	NATIVE MEAN C	
3	11	0:	17.27%	2.48	W/Adventives	
4	21	1 to 3:	29.09%	34.8	NATIVE FQI	
5	28	4 to 7:	50.00%	30.1	W/Adventives	
6	1	8 to 10:	3.64%	-0.03	NATIVE MEAN W	
7	5			0.2	W/Adventives	
8	1					
9	3					
10	0					

PHYSIOGNOMIC SUMMARY

PHYSIOGNOMY

NATIVE	110	74.83%		ADVENTIVE	37	25.17%
Tree	9	6.12%		Tree	1	0.68%
Shrub	6	4.08%		Shrub	3	2.04%
Vine	3	2.04%		Vine	0	0.00%
Forb	65	44.22%		Forb	20	13.61%
Grass	15	10.20%		Grass	13	8.84%
Sedge	12	8.16%		Sedge	0	0.00%
Fern	0	0.00%				

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOG	FRQ	COV	RFRQ	RCOV	RIV
N Tree	14	111	1.6	1	1.3
N Shrub	8	193	0.9	1.7	1.3
N Vine	7	47	0.8	0.4	0.6
N Forb	455	6066	51.9	54.3	53.1
N Grass	135	2256	15.4	20.2	17.8
N Sedge	41	364	4.7	3.3	4
A Tree	1	4	0.1	.	0.1
A Shrub	6	42	0.7	0.4	0.5
A Forb	99	569	11.3	5.1	8.2
A Grass	111	1524	12.7	13.6	13.1

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME (NWPL/MOHLENBROCK)	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Solidago canadensis	1	FACU	65	1284	7.4	11.5	9.5
Sorghastrum nutans	5	FACU	49	1222	5.6	10.9	8.3
Symphyotrichum lanceolatum	3	FAC	19	961	2.2	8.6	5.4
Rudbeckia subtomentosa	9	FACU	12	455	1.4	4.1	2.7
Setaria pumila	0	FAC	25	443	2.9	4	3.4
Poa pratensis	0	FAC	34	436	3.9	3.9	3.9
Monarda fistulosa	4	FACU	31	369	3.5	3.3	3.4
Andropogon gerardii	5	FAC	21	313	2.4	2.8	2.6
Euthamia graminifolia	4	FACW	12	232	1.4	2.1	1.7
Elymus virginicus	4	FACW	20	225	2.3	2	2.1
Phalaris arundinacea	0	FACW	10	224	1.1	2	1.6
Schizachyrium scoparium	5	FACU	12	218	1.4	2	1.7
Symphyotrichum pilosum	0	FACU	31	205	3.5	1.8	2.7
Ratibida pinnata	4	UPL	21	185	2.4	1.7	2
Eupatorium serotinum	0	FAC	10	183	1.1	1.6	1.4
Ambrosia artemisiifolia	0	FACU	25	178	2.9	1.6	2.2
Agrostis gigantea	0	FACW	14	167	1.6	1.5	1.5
Daucus carota	0	UPL	25	139	2.9	1.2	2
Rudbeckia triloba	3	FACU	7	135	0.8	1.2	1
Ambrosia trifida	0	FAC	12	128	1.4	1.1	1.3
Juncus dudleyi	4	FACW	7	115	0.8	1	0.9
Carex blanda	1	FAC	16	108	1.8	1	1.4
Elymus canadensis	4	FACU	14	104	1.6	0.9	1.3
Erigeron annuus	0	FACU	12	102	1.4	0.9	1.1
Cirsium arvense	0	FACU	12	91	1.4	0.8	1.1
Rudbeckia hirta	1	FACU	10	88	1.1	0.8	1
Oxalis stricta	0	FACU	9	86	1	0.8	0.9
Trifolium hybridum	0	FACU	14	86	1.6	0.8	1.2

Solidago gigantea	4	FACW	5	84	0.6	0.8	0.7
Pilea pumila	5	FACW	6	83	0.7	0.7	0.7
Pycnanthemum virginianum	5	FACW	6	81	0.7	0.7	0.7
Corylus americana	5	FACU	1	80	0.1	0.7	0.4
Symphyotrichum lateriflorum	4	FACW	14	79	1.6	0.7	1.2
Prunella vulgaris ssp. lanceolata	0	FAC	6	71	0.7	0.6	0.7
Bromus inermis	0	FACU	5	70	0.6	0.6	0.6
Carex vulpinoidea	2	FACW	5	67	0.6	0.6	0.6
Verbesina alternifolia	5	FACW	4	67	0.5	0.6	0.5
Elymus repens	0	FACU	6	66	0.7	0.6	0.6
Verbena urticifolia	5	FAC	3	63	0.3	0.6	0.5
Melilotus albus	0	UPL	13	59	1.5	0.5	1
Symphyotrichum drummondii	2	UPL	8	55	0.9	0.5	0.7
Persicaria hydropiper	2	OBL	6	53	0.7	0.5	0.6
Solidago rigida	4	FACU	5	52	0.6	0.5	0.5
Bidens frondosa	1	FACW	8	50	0.9	0.4	0.7
Salix nigra	4	OBL	1	50	0.1	0.4	0.3
Cinna arundinacea	5	FACW	1	50	0.1	0.4	0.3
Plantago rugelii	0	FAC	11	46	1.3	0.4	0.8
Carex stipata	3	OBL	2	45	0.2	0.4	0.3
Panicum virgatum	5	FAC	4	43	0.5	0.4	0.4
Sporobolus compositus	0	UPL	4	43	0.5	0.4	0.4
Vernonia fasciculata	5	FACW	4	41	0.5	0.4	0.4
Coreopsis tripteris	5	FAC	4	41	0.5	0.4	0.4
Ptelea trifoliata	7	FACU	1	40	0.1	0.4	0.2
Carex granularis	4	FACW	3	40	0.3	0.4	0.3
Symphyotrichum novae-angliae	4	FACW	6	37	0.7	0.3	0.5
Pycnanthemum tenuifolium	7	FAC	4	36	0.5	0.3	0.4
Trifolium repens	0	FACU	4	35	0.5	0.3	0.4
Heliopsis helianthoides	5	FACU	2	35	0.2	0.3	0.3
Silphium laciniatum	5	UPL	5	34	0.6	0.3	0.4

Carex grisea	2	FAC	4	32	0.5	0.3	0.4
Viola sororia	3	FAC	5	31	0.6	0.3	0.4
Carex scoparia	7	FACW	5	31	0.6	0.3	0.4
Zanthoxylum americanum	3	FACU	1	30	0.1	0.3	0.2
Poa compressa	0	FACU	2	30	0.2	0.3	0.2
Eupatorium altissimum	0	UPL	4	27	0.5	0.2	0.3
Populus deltoides	2	FAC	6	26	0.7	0.2	0.5
Bidens cernua	5	OBL	1	25	0.1	0.2	0.2
Ribes americanum	7	FACW	1	25	0.1	0.2	0.2
Rhamnus cathartica	0	FAC	4	24	0.5	0.2	0.3
Trifolium pratense	0	FACU	3	21	0.3	0.2	0.3
Schedonorus pratensis	0	FACU	4	21	0.5	0.2	0.3
Melilotus officinalis	0	FACU	5	21	0.6	0.2	0.4
Parthenocissus quinquefolia	2	FACU	3	20	0.3	0.2	0.3
Lotus corniculatus	0	FACU	1	20	0.1	0.2	0.1
Asclepias syriaca	0	FACU	2	20	0.2	0.2	0.2
Oenothera biennis	0	FACU	4	19	0.5	0.2	0.3
Elymus villosus	5	FACU	2	19	0.2	0.2	0.2
Verbena hastata	4	FACW	4	18	0.5	0.2	0.3
Symphyotrichum laeve	9	FACU	3	18	0.3	0.2	0.3
Rumex crispus	0	FAC	5	17	0.6	0.2	0.4
Toxicodendron radicans	2	FAC	2	16	0.2	0.1	0.2
Helenium autumnale	5	FACW	2	16	0.2	0.1	0.2
Ageratina altissima	4	FACU	2	16	0.2	0.1	0.2
Lycopus americanus	5	OBL	3	15	0.3	0.1	0.2
Persicaria maculosa	0	FACW	3	15	0.3	0.1	0.2
Potentilla norvegica	0	FAC	3	14	0.3	0.1	0.2
Cornus racemosa	1	FAC	3	14	0.3	0.1	0.2
Penstemon digitalis	4	FAC	3	13	0.3	0.1	0.2
Geum canadense	1	FAC	3	12	0.3	0.1	0.2
Lactuca serriola	0	FACU	2	12	0.2	0.1	0.2

Phragmites australis ssp. americanus	1	FACW	2	12	0.2	0.1	0.2
Phleum pratense	0	FACU	1	12	0.1	0.1	0.1
Urtica dioica ssp. gracilis	2	FACW	2	11	0.2	0.1	0.2
Panicum capillare	1	FAC	4	11	0.5	0.1	0.3
Eryngium yuccifolium	9	FAC	2	11	0.2	0.1	0.2
Echinacea purpurea	3	UPL	2	11	0.2	0.1	0.2
Vitis riparia	2	FACW	2	11	0.2	0.1	0.2
Carex frankii	8	OBL	1	10	0.1	0.1	0.1
Anemone canadensis	4	FACW	1	10	0.1	0.1	0.1
Arctium minus	0	FACU	2	10	0.2	0.1	0.2
Plantago lanceolata	0	FACU	1	10	0.1	0.1	0.1
Eragrostis spectabilis	3	UPL	1	10	0.1	0.1	0.1
Rosa multiflora	0	FACU	1	10	0.1	0.1	0.1
Panicum dichotomiflorum	0	FACW	1	10	0.1	0.1	0.1
Juglans nigra	5	FACU	1	10	0.1	0.1	0.1
Nabalus albus	5	FACU	2	9	0.2	0.1	0.2
Leonurus cardiaca	0	UPL	2	8	0.2	0.1	0.1
Carex annectens	5	FACW	1	8	0.1	0.1	0.1
Muhlenbergia mexicana	5	FACW	1	8	0.1	0.1	0.1
Fragaria virginiana	1	FACU	1	8	0.1	0.1	0.1
Carex cristatella	4	FACW	1	8	0.1	0.1	0.1
Lonicera tatarica	0	FACU	1	8	0.1	0.1	0.1
Erigeron canadensis	0	FACU	2	7	0.2	0.1	0.1
Triosteum perfoliatum	5	UPL	2	7	0.2	0.1	0.1
Acer saccharinum	0	FACW	1	6	0.1	0.1	0.1
Leersia oryzoides	4	OBL	2	6	0.2	0.1	0.1
Securigera varia	0	UPL	2	6	0.2	0.1	0.1
Carex tribuloides	3	OBL	1	6	0.1	0.1	0.1
Eutrochium maculatum	4	OBL	1	6	0.1	0.1	0.1
Glechoma hederacea	0	FACU	1	5	0.1	.	0.1
Acer negundo	0	FAC	1	5	0.1	.	0.1

Ostrya virginiana	5	FACU	1	5	0.1	.	0.1
Physalis heterophylla	3	UPL	1	5	0.1	.	0.1
Echinochloa crus-galli	0	FACW	1	5	0.1	.	0.1
Sonchus arvensis	0	FACU	1	5	0.1	.	0.1
Scirpus atrovirens	4	OBL	1	5	0.1	.	0.1
Carex lacustris	6	OBL	1	4	0.1	.	0.1
Hordeum jubatum	0	FAC	2	4	0.2	.	0.1
Bromus arvensis	0	FACU	2	4	0.2	.	0.1
Quercus macrocarpa	5	FAC	1	4	0.1	.	0.1
Malus pumila	0	UPL	1	4	0.1	.	0.1
Sisyrinchium albidum	7	FACU	1	4	0.1	.	0.1
Setaria faberi	0	FACU	2	4	0.2	.	0.1
Taraxacum officinale	0	FACU	1	4	0.1	.	0.1
Epilobium coloratum	3	OBL	1	4	0.1	.	0.1
Viburnum lentago	5	FAC	1	4	0.1	.	0.1
Lepidium virginicum	0	FACU	1	3	0.1	.	0.1
Artemisia vulgaris	0	UPL	1	3	0.1	.	0.1
Rudbeckia laciniata	5	FACW	1	3	0.1	.	0.1
Hackelia virginiana	0	FACU	1	3	0.1	.	0.1
Ulmus americana	3	FACW	1	3	0.1	.	0.1
Medicago lupulina	0	FACU	1	2	0.1	.	0.1
Gleditsia triacanthos	2	FACU	1	2	0.1	.	0.1
Lactuca biennis	4	FAC	1	2	0.1	.	0.1
Galium aparine	1	FACU	2	2	0.2	.	0.1
Senecio hieraciifolius	2	FAC	1	2	0.1	.	0.1
Agrimonia pubescens	5	UPL	1		0.1	.	0.1
			877	11176			

TRANSECT INVENTORY

Acronym	Scientific Name (NWPL/Mohlenbrock)	Scientific Name Synonym (Swink & Wilhelm)	Common Name (NWPL/Mohlenbrock)	C	WETNESS	WETNESS VALUE
ACENEG	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	0
ACESAI	Acer saccharinum	Acer saccharinum	Silver Maple	0	FACW	-1
EUPRUG	Ageratina altissima	Eupatorium rugosum	White Snakeroot	4	FACU	1

AGRPUB	Agrimonia pubescens	Agrimonia pubescens	Soft Grooveburr	5	UPL	2
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	-1
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	1
AMBTRI	Ambrosia trifida	Ambrosia trifida	Great Ragweed	0	FAC	0
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	0
ANECAN	Anemone canadensis	Anemone canadensis	Round-Leaf Thimbleweed	4	FACW	-1
ARCMIN	Arctium minus	ARCTIUM MINUS	Lesser Burrdock	0	FACU	1
ARTVUL	Artemisia vulgaris	ARTEMISIA VULGARIS	Common Mugwort	0	UPL	2
ASCSYR	Asclepias syriaca	Asclepias syriaca	Common Milkweed	0	FACU	1
BIDCER	Bidens cernua	Bidens cernua	Nodding Burr-Marigold	5	OBL	-2
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	-1
BROJAP	Bromus arvensis	BROMUS JAPONICUS	Field Brome	0	FACU	1
BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	1
CXANNE	Carex annectens	Carex annectens xanthocarpa	Yellow-Fruit Sedge	5	FACW	-1
CXBLAN	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	0
CXCRIS	Carex cristatella	Carex cristatella	Crested Sedge	4	FACW	-1
CXFRAN	Carex frankii	Carex frankii	Frank's Sedge	8	OBL	-2
CXGRAN	Carex granularis	Carex granularis	Limestone-Meadow Sedge	4	FACW	-1
CXGRIS	Carex grisea	Carex grisea	Inflated Narrow-Leaf Sedge	2	FAC	0
CXLACU	Carex lacustris	Carex lacustris	Lakebank Sedge	6	OBL	-2
CXSCOP	Carex scoparia	Carex scoparia	Pointed Broom Sedge	7	FACW	-1
CXSTIP	Carex stipata	Carex stipata	Stalk-Grain Sedge	3	OBL	-2
CXTRIB	Carex tribuloides	Carex tribuloides	Blunt Broom Sedge	3	OBL	-2
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	-1
CINARU	Cinna arundinacea	Cinna arundinacea	Sweet Wood-Reed	5	FACW	-1
CIRARV	Cirsium arvense	CIRSIUM ARVENSE	Canadian Thistle	0	FACU	1
CORTRI	Coreopsis tripteris	Coreopsis tripteris	Tall Tickseed	5	FAC	0
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	0
CORAME	Corylus americana	Corylus americana	American Hazelnut	5	FACU	1
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne’s Lace	0	UPL	2
ECHPUR	Echinacea purpurea	Echinacea purpurea	Purple Coneflower	3	UPL	2
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	-1
ELYCAN	Elymus canadensis	Elymus canadensis	Nodding Wild Rye	4	FACU	1
AGRREP	Elymus repens	AGROPYRON REPENS	Creeping Wild Rye	0	FACU	1
ELYVIL	Elymus villosus	Elymus villosus	Hairy Wild Rye	5	FACU	1
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	-1
EPICOL	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	-2
ERASPE	Eragrostis spectabilis	Eragrostis spectabilis	Purple Love Grass	3	UPL	2
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	1
ERICAN	Erigeron canadensis	Erigeron canadensis	Canadian Horseweed	0	FACU	1
ERYYUC	Eryngium yuccifolium	Eryngium yuccifolium	Button Eryngo	9	FAC	0
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	2
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	0
SOLGRA	Euthamia graminifolia	Solidago graminifolia; Solidago graminifolia nuttallii	Flat-Top Goldentop	4	FACW	-1
EUPMAC	Eutrochium maculatum	Eupatorium maculatum	Spotted Trumpetweed	4	OBL	-2
FRAVIR	Fragaria virginiana	Fragaria virginiana	Virginia Strawberry	1	FACU	1
GALAPA	Galium aparine	Galium aparine	Sticky-Willy	1	FACU	1
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	0
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	1
GLETRI	Gleditsia triacanthos	Gleditsia triacanthos	Honey-Locust	2	FACU	1
HACVIR	Hackelia virginiana	Hackelia virginiana	Beggar's-Lice	0	FACU	1
HELAUT	Helenium autumnale	Helenium autumnale	Fall Sneezeweed	5	FACW	-1
HELHEL	Heliopsis helianthoides	Heliopsis helianthoides	Smooth Oxeye	5	FACU	1
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	0

JUGNIG	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	1
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	4	FACW	-1
LACBIE	Lactuca biennis	Lactuca biennis	Wild Blue Lettuce	4	FAC	0
LACSER	Lactuca serriola	LACTUCA SERRIOLA	Prickly Lettuce	0	FACU	1
LEEORY	Leersia oryzoides	Leersia oryzoides	Rice Cut Grass	4	OBL	-2
LEOCAR	Leonurus cardiaca	LEONURUS CARDIACA	Motherwort	0	UPL	2
LEPVIR	Lepidium virginicum	Lepidium virginicum	Poorman's-Pepperwort	0	FACU	1
LONTAT	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	1
LOTCOR	Lotus corniculatus	LOTUS CORNICULATUS	Garden Bird's-Foot-Trefoil	0	FACU	1
LYCAME	Lycopus americanus	Lycopus americanus	Cut-Leaf Water-Horehound	5	OBL	-2
MALPUM	Malus pumila	MALUS PUMILA	Apple	0	UPL	2
MEDLUP	Medicago lupulina	MEDICAGO LUPULINA	Black Medick	0	FACU	1
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	2
MELLOF	Melilotus officinalis	MELILOTUS ALBA	Yellow Sweet-Clover	0	FACU	1
MONFIS	Monarda fistulosa	Monarda fistulosa	Oswego-Tea	4	FACU	1
MUHMEX	Muhlenbergia mexicana	Muhlenbergia mexicana	Mexican Muhly	5	FACW	-1
PREALB	Nabalus albus	Prenanthes alba	White Rattlesnake-Root	5	FACU	1
OENBIE	Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	1
OSTVIR	Ostrya virginiana	Ostrya virginiana	Eastern Hop-Hornbeam	5	FACU	1
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	1
PANCAP	Panicum capillare	Panicum capillare	Common Panic Grass	1	FAC	0
PANDIC	Panicum dichotomiflorum	Panicum dichotomiflorum	Fall Panic Grass	0	FACW	-1
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	5	FAC	0
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	1
PENDIG	Penstemon digitalis	Penstemon digitalis	Foxglove Beardtongue	4	FAC	0
PERHYR	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	-2
POLPER	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	-1
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	-1
PHLPRA	Phleum pratense	PHLEUM PRATENSE	Common Timothy	0	FACU	1
PHRAUSM	Phragmites australis ssp. americanus	Phragmites australis	Common Reed	1	FACW	-1
PHYHET	Physalis heterophylla	Physalis heterophylla	Clammy Ground-Cherry	3	UPL	2
PILPUM	Pilea pumila	Pilea pumila	Canadian Clearweed	5	FACW	-1
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	1
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	0
POACOM	Poa compressa	POA COMPRESSA	Flat-Stem Blue Grass	0	FACU	1
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	0
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	0
POTNOR	Potentilla norvegica	Potentilla norvegica	Norwegian Cinquefoil	0	FAC	0
PRUVULL	Prunella vulgaris ssp. lanceolata	Prunella vulgaris lanceolata	Common Selfheal	0	FAC	0
PTETRI	Ptelea trifoliata	Ptelea trifoliata	Common Hoptree	7	FACU	1
PYCTEN	Pycnanthemum tenuifolium	Pycnanthemum tenuifolium	Narrow-Leaf Mountain-Mint	7	FAC	0
PYCVIR	Pycnanthemum virginianum	Pycnanthemum virginianum	Virginia Mountain-Mint	5	FACW	-1
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	0
RATPIN	Ratibida pinnata	Ratibida pinnata	Yellow Coneflower	4	UPL	2
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	0
RIBAME	Ribes americanum	Ribes americanum	Wild Black Currant	7	FACW	-1
ROSMUL	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	1
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	1
RUDLAC	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	-1
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	1
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	1
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	0

SALNIG	Salix nigra	Salix nigra	Black Willow	4	OBL	-2
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	1
SCHSCO	Schizachyrium scoparium	Andropogon scoparius	Little False Bluestem	5	FACU	1
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OBL	-2
CORVAR	Securigera varia	CORONILLA VARIA	Crown Vetch	0	UPL	2
EREHIE	Senecio hieraciifolius	Erechtites hieracifolia	American Burnweed	2	FAC	0
SETFAB	Setaria faberi	SETARIA FABERI	Japanese Bristle Grass	0	FACU	1
SETGLA	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	0
SILLAC	Silphium laciniatum	Silphium laciniatum	Compass-Plant	5	UPL	2
SISALB	Sisyrinchium albidum	Sisyrinchium albidum	White Blue-Eyed-Grass	7	FACU	1
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	1
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	-1
SOLRIG	Solidago rigida	Solidago rigida	Hard-Leaf Flat-Top-Goldenrod	4	FACU	1
SONARV	Sonchus arvensis	SONCHUS ARVENSIS	Field Sow-Thistle	0	FACU	1
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	1
SPOASP	Sporobolus compositus	SPOROBOLUS ASPER	Head-Like Dropseed	0	UPL	2
ASTSAGD	Symphyotrichum drummondii	Aster sagittifolius drummondii	Drummond's Aster	2	UPL	2
ASTLAE	Symphyotrichum laeve	Aster laevis	Smooth Blue American-Aster	9	FACU	1
ASTSIM	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3	FAC	0
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	-1
ASTNOV	Symphyotrichum novae-angliae	Aster novae-angliae	New England American-Aster	4	FACW	-1
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	1
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	1
RHURAD	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	0
TRIHYB	Trifolium hybridum	TRIFOLIUM HYBRIDUM	Alsike Clover	0	FACU	1
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	1
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	1
TRIPER	Triosteum perfoliatum	Triosteum perfoliatum	Late Horse Gentian	5	UPL	2
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	-1
URTDIO	Urtica dioica ssp. gracilis	Urtica procera	Tall Nettle	2	FACW	-1
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy	4	FACW	-1
VERURT	Verbena urticifolia	Verbena urticifolia leiocarpa	White Vervain	5	FAC	0
ACTALT	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	-1
VERFAS	Vernonia fasciculata	Vernonia fasciculata	Prairie Ironweed	5	FACW	-1
VIBLEN	Viburnum lentago	Viburnum lentago	Nanny-Berry	5	FAC	0
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	0
VITRIP	Vitis riparia	Vitis riparia	River-Bank Grape	2	FACW	-1
XANAME	Zanthoxylum americanum	Xanthoxylum americanum	Toothachetree	3	FACU	1

TRANSECT STRING
>

QUAD	1
SPECIES	COVER
ASTSIM	60
PILPUM	4
RUDSUB	35
SOLCAN	15
VERHAS	2

>

QUAD	2
SPECIES	COVER
ACESAI	6
ASTSIM	85
BIDFRO	8
LEEORY	2
PERHYR	6
PILPUM	2
XANAME	30
>	
QUAD	3
SPECIES	COVER
ASTSIM	90
RUMCRI	4
>	
QUAD	4
SPECIES	COVER
ASTSIM	90
RUDSUB	12
>	
QUAD	5
SPECIES	COVER
ASTSIM	80
BIDFRO	2
CXFRAN	10
OXASTR	2
PILPUM	2
>	
QUAD	6
SPECIES	COVER
AMBART	4
ASTSIM	30
BIDFRO	5
LEPVIR	3
OENBIE	6
PERHYR	2
PILPUM	5
POTNOR	4
RUMCRI	2
SOLCAN	2
URTDIO	3
>	
QUAD	7
SPECIES	COVER
AMBART	2
AMBTRI	4
ASTSIM	50
OXASTR	2
PERHYR	4
PILPUM	10
RHURAD	10
VIOSOR	6
>	
QUAD	8
SPECIES	COVER
ASTSIM	40
EUPSER	8

PERHYR	3
PILPUM	60
PLARUG	4
VIOSOR	8

>

QUAD	9
SPECIES	COVER
ASTSIM	50
BIDCER	25
BIDFRO	15
PERHYR	30

>

QUAD	10
SPECIES	COVER
ASTSIM	90
BIDFRO	4
LEEORY	4
PERHYR	8

>

QUAD	11
SPECIES	COVER
ASTSIM	70
BIDFRO	3
CXLACU	4
ELYVIR	4
RIBAME	25
VERFAS	4

>

QUAD	12
SPECIES	COVER
AMBTRI	5
ASTSIM	90
ELYVIR	2
OXASTR	1
RUMCRI	4
VIOSOR	2

>

QUAD	13
SPECIES	COVER
ANECAN	10
ASTSIM	80
CIRARV	5
RUDSUB	8
SOLCAN	20

>

QUAD	14
SPECIES	COVER
ARTVUL	3
ASTSIM	8
DAUCAR	5
GLEHED	5
MONFIS	3
PLARUG	4
RUDLAC	3
RUDSUB	90
SOLCAN	4
VERHAS	2

>
QUAD 15
SPECIES COVER
ANDGER 25
ASTLAE 8
ASTPIL 4
ASTSIM 4
MONFIS 30
SOLCAN 25
SORNUT 2
>
QUAD 16
SPECIES COVER
ANDGER 25
ASTPIL 10
CXSCOP 2
POAPRA 6
PYCVIR 3
RUDSUB 15
SOLCAN 20
SORNUT 30
>
QUAD 17
SPECIES COVER
AGRPUB
AMBTRI 40
ASTSAGD 10
DAUCAR 3
ELYCAN 10
GEUCAN 5
MELALB 2
PARQUI 2
RHACAT 5
SOLCAN 2
>
QUAD 18
SPECIES COVER
AGRREP 15
BROINE 10
ELYVIL 4
ERIANN 8
RATPIN 5
RUDTRI 15
SORNUT 20
>
QUAD 19
SPECIES COVER
AMBART 4
ANDGER 15
ARCMIN 5
DAUCAR 2
ELYCAN 6
EUPSER 5
LACSER 4
POAPRA 10
RATPIN 8
SCHSCO 8

SETGLA	10
>	
QUAD	20
SPECIES	COVER
AMBART	5
POAPRA	10
SORNUT	75
>	
QUAD	21
SPECIES	COVER
AMBART	20
ELYCAN	8
HORJUB	2
LOTCOR	20
PLALAN	10
SETGLA	10
SORNUT	2
>	
QUAD	22
SPECIES	COVER
ELYCAN	30
MONFIS	5
PTETRI	40
RATPIN	5
SOLCAN	10
SORNUT	10
>	
QUAD	23
SPECIES	COVER
ACENEG	5
MONFIS	30
OSTVIR	5
RATPIN	8
SOLCAN	10
SORNUT	6
>	
QUAD	24
SPECIES	COVER
ARCMIN	5
DAUCAR	2
ELYVIL	15
ELYVIR	10
RUDTRI	60
SOLCAN	20
>	
QUAD	25
SPECIES	COVER
AMBART	6
BROJAP	2
CORVAR	2
ELYVIR	6
ERASPE	10
ERIANN	5
RHACAT	6
RUDHIR	2
RUDTRI	5
SCHSCO	10

>
 QUAD 26
SPECIES COVER
ASTPIL 5
DAUCAR 5
ELYCAN 4
ELYVIR 2
ERICAN 2
MELALB 10
POAPRA 10
POTNOR 5
SCHSCO 20
TRIHYB 8
TRIPRA 15
>
 QUAD 27
SPECIES COVER
DAUCAR 2
ELYCAN 8
ELYVIR 6
EUPALT 15
MELALB 5
PYCTEN 6
SORNUT 15
TRIHYB 5
TRIREP 20
>
 QUAD 28
SPECIES COVER
ASTSAGD 5
BIDFRO 5
CORRAC 5
CXBLAN 2
DAUCAR 2
MEDLUP 2
MONFIS 15
PENDIG 2
POAPRA 10
RATPIN 10
RUDSUB 10
SOLCAN 10
>
 QUAD 29
SPECIES COVER
ANDGER 10
ASTPIL 6
DAUCAR 2
ERIANN 2
ERICAN 5
MELALB 6
MONFIS 4
RUDHIR 10
SORNUT 25
TRIREP 5
>
 QUAD 30
SPECIES COVER

AMBART	5
ANDGER	10
ELYVIR	15
MELALB	5
PANCAP	2
PANVIR	15
PLARUG	4
POAPRA	10
SETGLA	10
TRIPER	5

>

QUAD	31
SPECIES	COVER
AMBART	5
BROINE	20
ELYVIR	10
EUPSER	20
GLETRI	2
PANCAP	2
PHYHET	5
PLARUG	5
SOLCAN	8
SORNUT	30
TRIPER	2
TRIREP	4

>

QUAD	32
SPECIES	COVER
ANDGER	10
ASTLAT	2
ASTPIL	5
CXTRIB	6
ELYVIR	2
HELAUT	10
LYCAME	5
PANCAP	2
PHRAUSM	2
PLARUG	5
SETGLA	4
SOLCAN	10
SORNUT	10
TRIHYB	2
VERHAS	8

>

QUAD	33
SPECIES	COVER
ASTLAT	2
ASTPIL	2
CXGRAN	5
EUPSER	10
MONFIS	2
POAPRA	5
RATPIN	15
SETGLA	10
SILLAC	5
SOLRIG	5
SORNUT	25

TRIHYB	6
VERHAS	6
>	
QUAD	34
SPECIES	COVER
CXBLAN	2
ELYVIR	2
MONFIS	2
PLARUG	4
POAPRA	4
RATPIN	5
SORNUT	85
TRIHYB	6
>	
QUAD	35
SPECIES	COVER
ASTPIL	8
MONFIS	5
POAPRA	10
RATPIN	2
SOLCAN	10
SORNUT	60
>	
QUAD	36
SPECIES	COVER
AMBART	2
MONFIS	2
POAPRA	10
SORNUT	90
TRIHYB	2
>	
QUAD	37
SPECIES	COVER
ASTLAE	5
ASTPIL	4
CORTRI	15
ELYVIR	4
MELALB	2
MONFIS	2
POAPRA	15
QUEMAC	4
SOLCAN	10
SOLRIG	20
SORNUT	10
>	
QUAD	38
SPECIES	COVER
ASTLAE	5
ASTPIL	5
MONFIS	5
RATPIN	20
SOLCAN	80
SORNUT	5
>	
QUAD	39
SPECIES	COVER
AMBART	2

DAUCAR	2
ERIANN	4
MALPUM	4
PLARUG	4
POAPRA	10
SOLCAN	5
SOLGRA	75

>

QUAD	40
SPECIES	COVER
ERYYUC	5
PLARUG	4
SOLCAN	15
SOLGRA	75
TRIHYB	6

>

QUAD	41
SPECIES	COVER
AGRALB	10
ANDGER	10
CXBLAN	5
POPDEL	2
SOLCAN	20
SORNUT	50
SPOASP	8

>

QUAD	42
SPECIES	COVER
ASTPIL	5
CORAME	80
CORTRI	6
MONFIS	10
PHAARU	5
SCHSCO	5
SOLCAN	20

>

QUAD	43
SPECIES	COVER
PANVIR	15
PLARUG	5
POAPRA	30
POPDEL	2
SETGLA	2
SOLCAN	5
SOLGRA	10
SORNUT	20
SPOASP	10
TRIHYB	10

>

QUAD	44
SPECIES	COVER
AGRALB	2
AMBART	10
DAUCAR	5
MELALB	5
POAPRA	30
POPDEL	6

RATPIN	10
RUDTRI	5
SETGLA	5
SOLCAN	10
SOLGRA	10
SORNUT	10

>

QUAD	45
SPECIES	COVER
CORTRI	5
POPDEL	5
RATPIN	5
RHACAT	10
ROSMUL	10
SETGLA	30
SORNUT	50

>

QUAD	46
SPECIES	COVER
ASTPIL	5
CORVAR	4
PYCTEN	10
RUDTRI	2
SOLCAN	10
SORNUT	20
TRIHYB	4

>

QUAD	47
SPECIES	COVER
ASTPIL	5
ASTSAGD	5
ERIANN	5
PYCTEN	10
SOLGIG	10
SORNUT	40

>

QUAD	48
SPECIES	COVER
BROINE	10
CIRARV	2
HELHEL	20
MONFIS	30
POAPRA	10
RUDTRI	40
SOLCAN	5

>

QUAD	49
SPECIES	COVER
EUPALT	2
FESELA	6
PENDIG	6
POAPRA	10
PRUVULL	6
PYCTEN	10
RUDTRI	8
SCHSCO	10
SETGLA	8

SOLCAN 10
SORNUT 10
>
QUAD 50
SPECIES COVER
EUPALT 5
MONFIS 8
OENBIE 5
POAPRA 30
SALNIG 50
SETGLA 4
SOLCAN 8
>
QUAD 51
SPECIES COVER
AMBART 2
ANDGER 10
FESELA 4
POAPRA 5
RATPIN 10
SOLCAN 10
SORNUT 5
VERURT 8
>
QUAD 52
SPECIES COVER
AGRREP 20
ANDGER 10
BROINE 20
CORRAC 5
DAUCAR 2
ELYCAN 5
FESELA 5
SILLAC 10
SORNUT 10
VIOSOR 5
>
QUAD 53
SPECIES COVER
AMBART 5
ANDGER 5
ASCSYR 10
ASTPIL 5
ERIANN 4
POAPRA 10
SCHSCO 10
SETGLA 5
SORNUT 5
>
QUAD 54
SPECIES COVER
ANDGER 20
ASTPIL 8
ECHCRU 5
EUPSER 30
LYCAME 8
MELALB 8

PANDIC	10
RUMCRI	5
SOLCAN	25
>	
QUAD	55
SPECIES	COVER
ASTPIL	10
CXBLAN	5
ELYCAN	5
ERIANN	20
SOLCAN	75
>	
QUAD	56
SPECIES	COVER
MONFIS	5
PHAARU	8
POAPRA	30
SOLCAN	90
>	
QUAD	57
SPECIES	COVER
CXBLAN	5
LEOCAR	5
POAPRA	5
PRUVULL	8
RATPIN	10
SOLCAN	60
SORNUT	5
>	
QUAD	58
SPECIES	COVER
AGRALB	10
AMBART	8
ASTPIL	5
ASTSIM	20
CXANNE	8
CXBLAN	10
ELYVIR	20
MONFIS	5
SORNUT	20
SPOASP	20
>	
QUAD	59
SPECIES	COVER
ASTNOV	5
CXBLAN	10
ELYVIR	5
ERYYUC	6
FESELA	6
MELALB	2
PLARUG	5
SETGLA	20
SOLCAN	30
>	
QUAD	60
SPECIES	COVER
AGRALB	4

PANVIR	10
POACOM	10
SILLAC	10
SORNUT	10
VERURT	50

>

QUAD	61
SPECIES	COVER
AGRALB	40
AMBART	10
HORJUB	2
OXASTR	2
PHAARU	8
RATPIN	20
SETGLA	10
SORNUT	40

>

QUAD	62
SPECIES	COVER
AGRALB	20
ERIANN	2
POPDEL	5
RUDHIR	5
SETGLA	20
SISALB	4
SORNUT	10
TRIHYB	6

>

QUAD	63
SPECIES	COVER
ERIANN	35
RATPIN	5
SORNUT	55

>

QUAD	64
SPECIES	COVER
AMBART	5
ANDGER	5
ASCSYR	10
ASTPIL	5
ERIANN	4
POAPRA	10
SCHSCO	10
SETGLA	5
SORNUT	5

>

QUAD	65
SPECIES	COVER
AGRALB	30
ASTPIL	10
MUHMEX	8
POACOM	20
RATPIN	10
RUDHIR	2
SILLAC	4
SOLCAN	2
SORNUT	8

>
QUAD 66
SPECIES COVER
AGRALB 5
CORTRI 15
EUPALT 5
POAPRA 10
RATPIN 15
SETGLA 10
SOLCAN 10
SOLRIG 20
>
QUAD 67
SPECIES COVER
AGRALB 5
CIRARV 2
ERIANN 5
MONFIS 5
PHRAUSM 10
POAPRA 15
>
QUAD 68
SPECIES COVER
AMBART 20
CIRARV 10
DAUCAR 20
ECHPUR 6
POAPRA 20
SOLCAN 15
TRIHYB 10
>
QUAD 69
SPECIES COVER
CIRARV 5
MELALB 2
MONFIS 10
PANCAP 5
POLPER 8
RATPIN 5
SETGLA 80
>
QUAD 70
SPECIES COVER
CIRARV 2
DAUCAR 2
EUPSER 15
MELALB 5
MONFIS 5
PHAARU 15
POAPRA 25
POLPER 2
RATPIN 2
SETGLA 25
SOLCAN 5
TRIHYB 10
>
QUAD 71

SPECIES	COVER
AMBART	5
ASTPIL	5
DAUCAR	10
MELALB	2
MONFIS	10
PHAARU	50
RUDHIR	10

>

QUAD	72
SPECIES	COVER
AMBART	5
DAUCAR	2
MONFIS	30
RUDHIR	40
SOLCAN	20
SOLRIG	5

>

QUAD	73
SPECIES	COVER
AGRREP	5
MONFIS	30
PENDIG	5
POAPRA	20
SILLAC	5
SOLCAN	50
SORNUT	5

>

QUAD	74
SPECIES	COVER
ASTPIL	5
CIRARV	5
DAUCAR	10
MONFIS	20
POLPER	5
RUDHIR	10
SETGLA	20
SOLCAN	5
SOLGRA	20
SONARV	5
VERURT	5

>

QUAD	75
SPECIES	COVER
AGRALB	5
CXVULP	10
POAPRA	5
RATPIN	5
SOLGRA	10
SORNUT	80
SPOASP	5

>

QUAD	76
SPECIES	COVER
AMBART	12
ASTLAT	5
BROJAP	2

CIRARV	2
DAUCAR	20
JUGNIG	10
MONFIS	10
OXASTR	5
PHAARU	10
RUMCRI	2
SOLCAN	5
TRIHYB	5

>

QUAD	77
SPECIES	COVER
AMBART	5
LACSER	8
LEOCAR	3
PHAARU	70
RUDHIR	2
SETGLA	10
URTDIO	8

>

QUAD	78
SPECIES	COVER
AGRALB	20
BIDFRO	8
DAUCAR	20
MONFIS	10
RUDHIR	5
SETGLA	10
SOLCAN	30

>

QUAD	79
SPECIES	COVER
AGRREP	20
CIRARV	5
MONFIS	20
PHAARU	50
RUDHIR	2

>

QUAD	80
SPECIES	COVER
MONFIS	5
PHAARU	5
SETGLA	100
SORNUT	5

>

QUAD	81
SPECIES	COVER
ASTPIL	2
DAUCAR	2
MELALB	5
MONFIS	10
SOLCAN	15

>

QUAD	82
SPECIES	COVER
ASTPIL	4
CXBLAN	10

CXGRAN	5
LACBIE	2
POAPRA	10
SCHSCO	10
SETGLA	10
SORNUT	70
>	
QUAD	83
SPECIES	COVER
ANDGER	10
SCHSCO	10
SORNUT	50
>	
QUAD	84
SPECIES	COVER
AMBART	20
ANDGER	10
CXGRAN	30
POAPRA	10
SETGLA	10
SOLCAN	5
SORNUT	20
>	
QUAD	85
SPECIES	COVER
POAPRA	25
RATPIN	10
SCHSCO	25
SOLCAN	5
SORNUT	25
>	
QUAD	86
SPECIES	COVER
EUPSER	5
POTNOR	5
SCHSCO	40
SORNUT	30
>	
QUAD	87
SPECIES	COVER
ANDGER	10
POAPRA	10
SCHSCO	60
SOLCAN	10
SORNUT	10
>	
QUAD	88
SPECIES	COVER
ANDGER	40
ASTLAT	8
ASTPIL	2
CXBLAN	4
CXSCOP	5
JUNDUD	25
POAPRA	4
PRUVULL	6
PYCVIR	4

SOLCAN	8
>	
QUAD	89
SPECIES	COVER
ANDGER	30
ASTLAT	6
CXBLAN	10
CXSCOP	2
JUNDUD	4
PRUVULL	15
PYCVIR	3
SETFAB	2
SOLGIG	4
SOLGRA	3
>	
QUAD	90
SPECIES	COVER
ANDGER	8
ASTNOV	4
PYCVIR	65
SOLCAN	2
SOLGIG	15
SORNUT	12
>	
QUAD	91
SPECIES	COVER
ANDGER	15
ASTPIL	2
CXSCOP	2
JUNDUD	4
PYCVIR	4
SOLGIG	40
SORNUT	8
>	
QUAD	92
SPECIES	COVER
ANDGER	25
CXVULP	35
JUNDUD	40
VERFAS	25
>	
QUAD	93
SPECIES	COVER
AGRALB	2
ANDGER	10
ASTSIM	6
CXVULP	8
JUNDUD	35
PYCVIR	2
SOLCAN	3
SOLGIG	15
SOLGRA	6
SORNUT	10
VERFAS	8
>	
QUAD	94
SPECIES	COVER

AMBART	2
AMBTRI	8
ASTPIL	25
CXBLAN	2
EUPRUG	10
EUPSER	15
SOLCAN	8
SOLGRA	15
TAROFF	4

>

QUAD	95
SPECIES	COVER
ASTPIL	10
ASTSAGD	3
CXBLAN	25
ELYVIR	4
EPICOL	4
EUPSER	60
RUDSUB	30
SCIATV	5
SOLCAN	2
SOLGRA	4

>

QUAD	96
SPECIES	COVER
DAUCAR	3
ELYVIR	4
RUDSUB	70
SOLCAN	25
SOLGRA	2

>

QUAD	97
SPECIES	COVER
ASTSIM	8
ELYVIR	6
EUPMAC	6
MONFIS	6
OENBIE	2
RUDSUB	65
SOLCAN	20

>

QUAD	98
SPECIES	COVER
AMBTRI	6
BROINE	10
ECHPUR	5
OXASTR	40
RUDSUB	30
SETFAB	2
SOLCAN	15
SOLRIG	2

>

QUAD	99
SPECIES	COVER
ASTNOV	8
ASTPIL	6
CORRAC	4

EUPRUG	6
MONFIS	35
RHACAT	3
RUDSUB	20
SOLCAN	20
VITRIP	5

>

QUAD	100
SPECIES	COVER
ASTNOV	8
ASTPIL	6
CXBLAN	4
DAUCAR	3
ELYCAN	2
FRAVIR	8
HELHEL	15
PLARUG	2
PRUVULL	30
SOLCAN	35
SORNUT	20

>

QUAD	101
SPECIES	COVER
ACTALT	10
AGRALB	6
AMBTRI	6
ASTLAT	2
CXGRIS	15
DAUCAR	2
GALAPA	1
JUNDUD	3
LYCAME	2
PHLPRA	12
SOLCAN	15

>

QUAD	102
SPECIES	COVER
CXCRIS	8
ELYCAN	6
MELLOF	6
PANVIR	3
SOLCAN	8

>

QUAD	103
SPECIES	COVER
ACTALT	12
AMBTRI	10
ASTLAT	6
ASTPIL	25
CXBLAN	6
CXGRIS	12
ELYCAN	4
ELYVIR	6
POAPRA	2
SOLCAN	4
VERFAS	4

>

QUAD	104
SPECIES	COVER
AMBART	2
AMBTRI	15
ASTLAT	8
ASTSIM	10
CXGRIS	3
ELYVIR	45
HELAUT	6
MELLOF	5
PHAARU	3
POPDEL	6
SOLGRA	2

>

QUAD	105
SPECIES	COVER
AMBTRI	4
ASTLAT	4
CIRARV	2
ELYVIR	70
EUPSER	15
OENBIE	6
OXASTR	3
SOLCAN	5
VITRIP	6

>

QUAD	106
SPECIES	COVER
AGRALB	8
AGRREP	4
ASTNOV	8
ASTPIL	4
CXVULP	8
DAUCAR	2
ELYCAN	8
ERIANN	8
MELLOF	2
SETGLA	15
SOLCAN	30

>

QUAD	107
SPECIES	COVER
AMBART	12
CIRARV	6
DAUCAR	8
EREHIE	2
MELLOF	6
SOLCAN	65
SORNUT	4
TRIPRA	4
TRIREP	6

>

QUAD	108
SPECIES	COVER
AGRREP	2
ASTNOV	4
ASTSAGD	8

CXBLAN	4
DAUCAR	3
ELYCAN	5
MELLOF	2
OXASTR	30
SOLCAN	65
TRIPRA	2
VIOSOR	10

>

QUAD	109
SPECIES	COVER
ASTLAT	2
ASTPIL	2
ASTSAGD	4
CXGRIS	2
CXSCOP	20
CXVULP	6
ELYVIR	2
JUNDUD	4
OXASTR	1
PRUVULL	6
RUDSUB	70
TRIHYB	6

>

QUAD	110
SPECIES	COVER
ASTLAT	10
ASTSAGD	8
CXBLAN	4
GEUCAN	2
HACVIR	3
PREALB	4
SOLCAN	80
ULMAME	3

>

QUAD	111
SPECIES	COVER
ACTALT	25
AMBTRI	4
ASTLAT	6
CXSTIP	30
GEUCAN	5
SOLCAN	35

>

QUAD	112
SPECIES	COVER
ACTALT	20
AMBTRI	20
ASTLAT	8
CIRARV	45
CXSTIP	15
ELYCAN	3
LONTAT	8
PARQUI	8
PREALB	5
VIBLEN	4

>

QUAD	113
SPECIES	COVER
AMBTRI	6
ASTLAT	10
ASTSAGD	12
CINARU	50
GALAPA	1
PARQUI	10
RHURAD	6
SOLCAN	8

>

SITE: WCERT
LOCALE: Reach 5E
BY: MO, BS, CC, KC, WO
NOTES: 9/15/17

TRANSECT QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS
T1-1	2.33	0.88	4.04	2.47	0.33	0.88	3	8
T1-10	2.5	0.71	3.54	1.89	0.5	1.14	2	7
T1-11	1	0.43	1.73	1.13	1	0.86	3	7
T1-12	0	0	0	0	1	0.75	1	4
T1-13	2	0.4	2	0.89	1	1.2	1	5
T1-14	0.75	0.33	1.5	1	0.75	0.78	4	9
T1-15	0	0	0	0	0.5	0.83	2	6
T1-16	1.67	0.83	2.89	2.04	1.33	1.17	3	6
T1-17	0	0	0	0	1	0.6	1	5
T1-18	0	0	0	0	1	1	2	7
T1-19	0	0	0	0	1	1	2	5
T1-2	0.25	0.14	0.5	0.38	0.75	1	4	7
T1-20	2.5	0.71	3.54	1.89	1.5	1.29	2	7
T1-21	2.5	0.83	3.54	2.04	1.5	1	2	6
T1-22	3	3	7.35	7.35	0.83	0.83	6	6
T1-3	1.5	0.6	2.12	1.34	0.5	1	2	5
T1-4	1	0.38	1.73	1.06	0.67	1	3	8
T1-5	3	0.75	3	1.5	1	0.5	1	4
T1-6	1	0.5	1.73	1.22	1	0.83	3	6
T1-7	3	1	3	1.73	1	1	1	3
T1-8	0.33	0.17	0.58	0.41	0.67	0.83	3	6
T1-9	0.75	0.38	1.5	1.06	0.75	1	4	8
T2-1	0.33	0.14	0.58	0.38	1	1.29	3	7
T2-10	2.5	1.67	5	4.08	0.75	0.67	4	6
T2-11	0.75	0.33	1.5	1	1	0.67	4	9
T2-12	2.4	2	5.37	4.9	0.2	0.33	5	6
T2-13	1.67	0.83	2.89	2.04	1.33	1.17	3	6
T2-14	0	0	0	0	1	0.43	3	7
T2-15	0	0	0	0	1	0.8	3	5
T2-16	0	0	0	0	1	0.67	1	3
T2-17	1.67	1	2.89	2.24	1.33	1.4	3	5
T2-18	0	0	0	0	1	0.75	1	4
T2-19	0	0	0	0	1	0.86	2	7
T2-2	0	0	0	0	0.5	0.8	2	5
T2-20	0.5	0.2	0.71	0.45	0.5	0.8	2	5
T2-21	0.5	0.17	0.71	0.41	0.5	0.83	2	6
T2-22	0.5	0.29	1	0.76	0.5	0.86	4	7
T2-23	0.8	0.44	1.79	1.33	0.4	0.78	5	9
T2-3		0	0	0		1.6		5
T2-4	0	0	0	0	1	1.2	2	5
T2-5	0	0	0	0	1	1	1	4
T2-6	0	0	0	0	0.5	1	2	4
T2-7	0	0	0	0	1	1.5	1	2
T2-8	0	0	0	0	1	0.86	2	7
T2-9	0	0	0	0	1	1.5	1	4
T3-1	0	0	0	0	1	1	2	7
T3-2	3.33	1.67	5.77	4.08	0.33	0.67	3	6
T3-3	3.25	1.3	6.5	4.11	-0.25	0.6	4	10
T3-4	2.2	0.92	4.92	3.18	0	0.58	5	12

T3-5	2.13	1.31	6.01	4.71	0.25	0.54	8	13
T4-1	3.2	1.33	7.16	4.62	0.4	0.75	5	12
T4-2	5	2	7.07	4.47	0.5	0.8	2	5
T4-3	0	0	0	0	0	1.17	1	6
T4-4	3.6	1.64	8.05	5.43	-0.2	0.45	5	11
T5-1	4	1.33	4	2.31	-1	0.67	1	3
T5-2	0.38	0.21	1.06	0.8	0.63	0.86	8	14
T5-3	1.17	0.78	2.86	2.33	0.33	0.67	6	9
T5-4	3.8	1.73	8.5	5.73	0.6	0.91	5	11
T6-1	3	1.91	7.94	6.33	1	0.91	7	11
T6-2	3.6	3	8.05	7.35	0	0.17	5	6
T6-3	3.75	1.88	7.5	5.3	0	0.5	4	8
T6-4	3.78	3.09	11.33	10.25	-0.78	-0.64	9	11
T6-5	3.43	3.43	9.07	9.07	-0.71	-0.71	7	7
T6-6	3.44	3.1	10.33	9.8	-0.78	-0.7	9	10
T6-7	2.63	1.91	7.42	6.33	-0.63	-0.64	8	11
AVG	1.48	0.79	2.93	2.2	0.6	0.78	3.31	6.86
STD	1.44	0.92	3.15	2.67	0.57	0.46	2.16	2.61

TRANSECT SUMMARY

C	NUMBER				
0	11			53	NATIVE SPECIES
1	9			86	TOTAL SPECIES
2	6			2.85	NATIVE MEAN C
3	4			1.76	W/Adventives
4	7	0:	20.75%	20.74	NATIVE FQI
5	11	1 to 3:	35.85%	16.28	W/Adventives
6	2	4 to 7:	41.51%	0.02	NATIVE MEAN W
7	2	8 to 10:	1.89%	0.31	W/Adventives
8	0				
9	1				
10	0				

PHYSIOGNOMIC SUMMARY

PHYSIOGNOMY

NATIVE	53	61.63%		ADVENTIVE	33	38.37%
Tree	2	2.33%		Tree	1	1.16%
Shrub	3	3.49%		Shrub	1	1.16%
Vine	2	2.33%		Vine	1	1.16%
Forb	35	40.70%		Forb	21	24.42%
Grass	6	6.98%		Grass	9	10.47%
Sedge	5	5.81%		Sedge	0	0.00%
Fern	0	0.00%				

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOG	FRQ	COV	RFRQ	RCOV	RIV
N Tree	2	16	0.4	0.3	0.4
N Shrub	4	38	0.9	0.7	0.8
N Vine	3	12	0.7	0.2	0.4
N Forb	176	1725	39.5	32.1	35.8

N Grass	18	350	4	6.5	5.3
N Sedge	12	99	2.7	1.8	2.3
A Tree	1	3	0.2	0.1	0.1
A Shrub	3	14	0.7	0.3	0.5
A Vine	1	3	0.2	0.1	0.1
A Forb	167	2372	37.4	44.1	40.8
A Grass	59	741	13.2	13.8	13.5

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME (NWPL/MOHLENBROCK)	C	WETNESS	FRQ		COV	RFRQ	RCOV	RIV
Trifolium hybridum	0	FACU		40	1162	9	21.6	15.3
Setaria pumila	0	FAC		23	382	5.2	7.1	6.1
Erigeron annuus	0	FACU		30	365	6.7	6.8	6.8
Daucus carota	0	UPL		39	357	8.7	6.6	7.7
Melilotus albus	0	UPL		15	295	3.4	5.5	4.4
Poa pratensis	0	FAC		17	229	3.8	4.3	4
Rudbeckia triloba	3	FACU		9	220	2	4.1	3.1
Plantago rugelii	0	FAC		19	201	4.3	3.7	4
Symphyotrichum pilosum	0	FACU		19	170	4.3	3.2	3.7
Andropogon gerardii	5	FAC		9	159	2	3	2.5
Calamagrostis canadensis	3	OBL		3	140	0.7	2.6	1.6
Ambrosia artemisiifolia	0	FACU		14	132	3.1	2.5	2.8
Trifolium pratense	0	FACU		12	125	2.7	2.3	2.5
Solidago canadensis	1	FACU		17	116	3.8	2.2	3
Rudbeckia subtomentosa	9	FACU		7	111	1.6	2.1	1.8
Plantago lanceolata	0	FACU		7	87	1.6	1.6	1.6
Agastache scrophulariaefolia	5	UPL		6	85	1.3	1.6	1.5
Rumex crispus	0	FAC		8	71	1.8	1.3	1.6
Medicago lupulina	0	FACU		7	67	1.6	1.2	1.4
Taraxacum officinale	0	FACU		12	57	2.7	1.1	1.9
Anemone canadensis	4	FACW		6	53	1.3	1	1.2
Carex blanda	1	FAC		8	47	1.8	0.9	1.3
Trifolium repens	0	FACU		5	44	1.1	0.8	1
Eriochloa villosa	0	UPL		6	34	1.3	0.6	1
Carex lacustris	6	OBL		1	30	0.2	0.6	0.4
Salix interior	1	FACW		2	30	0.4	0.6	0.5
Schedonorus pratensis	0	FACU		2	25	0.4	0.5	0.5
Verbascum thapsus	0	UPL		4	25	0.9	0.5	0.7
Sorghastrum nutans	5	FACU		1	25	0.2	0.5	0.3
Geum canadense	1	FAC		4	22	0.9	0.4	0.7
Zizia aurea	7	FAC		2	22	0.4	0.4	0.4
Rudbeckia laciniata	5	FACW		3	22	0.7	0.4	0.5
Symphyotrichum lateriflorum	4	FACW		6	21	1.3	0.4	0.9
Bromus inermis	0	FACU		1	20	0.2	0.4	0.3
Agrostis gigantea	0	FACW		3	20	0.7	0.4	0.5
Phalaris arundinacea	0	FACW		3	20	0.7	0.4	0.5
Lysimachia ciliata	4	FACW		2	20	0.4	0.4	0.4
Fragaria virginiana	1	FACU		3	17	0.7	0.3	0.5
Acalypha rhomboidea	0	FACU		2	15	0.4	0.3	0.4
Melilotus officinalis	0	FACU		3	15	0.7	0.3	0.5
Symphyotrichum lanceolatum	3	FAC		1	15	0.2	0.3	0.3
Rhamnus cathartica	0	FAC		3	14	0.7	0.3	0.5
Viola sororia	3	FAC		4	12	0.9	0.2	0.6
Muhlenbergia schreberi	0	FAC		2	12	0.4	0.2	0.3
Rudbeckia hirta	1	FACU		4	11	0.9	0.2	0.6
Convolvulus arvensis	0	UPL		2	10	0.4	0.2	0.3

Barbarea vulgaris	0	FAC	2	10	0.4	0.2	0.3
Prunus americana	5	UPL	1	10	0.2	0.2	0.2
Cirsium vulgare	0	FACU	2	10	0.4	0.2	0.3
Verbesina alternifolia	5	FACW	1	10	0.2	0.2	0.2
Carex vulpinoidea	2	FACW	1	10	0.2	0.2	0.2
Pilea pumila	5	FACW	1	10	0.2	0.2	0.2
Parthenocissus quinquefolia	2	FACU	2	9	0.4	0.2	0.3
Oxalis stricta	0	FACU	2	8	0.4	0.1	0.3
Carex scoparia	7	FACW	1	8	0.2	0.1	0.2
Panicum virgatum	5	FAC	1	8	0.2	0.1	0.2
Eupatorium serotinum	0	FAC	1	8	0.2	0.1	0.2
Iris virginica var. shrevei	5	OBL	1	8	0.2	0.1	0.2
Lysimachia nummularia	0	FACW	1	8	0.2	0.1	0.2
Glechoma hederacea	0	FACU	3	7	0.7	0.1	0.4
Setaria faberi	0	FACU	3	6	0.7	0.1	0.4
Elymus virginicus	4	FACW	2	6	0.4	0.1	0.3
Fraxinus pennsylvanica	1	FACW	1	6	0.2	0.1	0.2
Juncus dudleyi	4	FACW	1	6	0.2	0.1	0.2
Solidago gigantea	4	FACW	1	6	0.2	0.1	0.2
Verbascum blattaria	0	FACU	1	5	0.2	0.1	0.2
Oenothera biennis	0	FACU	1	5	0.2	0.1	0.2
Alliaria petiolata	0	FAC	1	5	0.2	0.1	0.2
Tradescantia ohiensis	2	FACU	1	5	0.2	0.1	0.2
Carduus nutans	0	FACU	1	5	0.2	0.1	0.2
Anemone virginiana	5	FACU	1	5	0.2	0.1	0.2
Cornus racemosa	1	FAC	1	5	0.2	0.1	0.2
Lobelia siphilitica	6	OBL	1	5	0.2	0.1	0.2
Sonchus arvensis	0	FACU	1	5	0.2	0.1	0.2
Prunella vulgaris ssp. lanceolata	0	FAC	1	5	0.2	0.1	0.2
Dactylis glomerata	0	FACU	1	5	0.2	0.1	0.2
Bidens frondosa	1	FACW	2	5	0.4	0.1	0.3
Symphyotrichum drummondii	2	UPL	1	4	0.2	0.1	0.1
Carex cristatella	4	FACW	1	4	0.2	0.1	0.1
Ulmus pumila	0	UPL	1	3	0.2	0.1	0.1
Juncus tenuis	0	FAC	1	3	0.2	0.1	0.1
Rubus occidentalis	2	UPL	1	3	0.2	0.1	0.1
Toxicodendron radicans	2	FAC	1	3	0.2	0.1	0.1
Solanum dulcamara	0	FAC	1	3	0.2	0.1	0.1
Heliopsis helianthoides	5	FACU	1	2	0.2	.	0.1
Sonchus asper	0	FACU	1	2	0.2	.	0.1
			446	5373			

TRANSECT INVENTORY

Acronym	Scientific Name (NWPL/Mohlenbrock)	Scientific Name Synonym (Swink & Wilhelm)	Common Name (NWPL/Mohlenbrock)	C	WETNESS	WETNESS VALUE
ACARHO	Acalypha rhomboidea	Acalypha rhomboidea	Common Three-Seed-Mercury	0	FACU	1
AGASCR	Agastache scrophulariaefolia	Agastache scrophulariaefolia	Purple Giant Hyssop	5	UPL	2
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	-1
ALLPET	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	0
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	1
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	0
ANECAN	Anemone canadensis	Anemone canadensis	Round-Leaf Thimbleweed	4	FACW	-1
ANEVIR	Anemone virginiana	Anemone virginiana	Tall Thimbleweed	5	FACU	1
BARVUL	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket	0	FAC	0
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	-1

BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	1
CALCAN	Calamagrostis canadensis	Calamagrostis canadensis	Bluejoint	3	OBL	-2
CARNUT	Carduus nutans	CARDUUS NUTANS	Nodding Plumeless-Thistle	0	FACU	1
CXBLAN	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	0
CXCRIS	Carex cristatella	Carex cristatella	Crested Sedge	4	FACW	-1
CXLACU	Carex lacustris	Carex lacustris	Lakebank Sedge	6	OBL	-2
CXSCOP	Carex scoparia	Carex scoparia	Pointed Broom Sedge	7	FACW	-1
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	-1
CIRVUL	Cirsium vulgare	CIRSIUM VULGARE	Bull Thistle	0	FACU	1
CONARV	Convolvulus arvensis	CONVOLVULUS ARVENSIS	Field Bindweed	0	UPL	2
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	0
DACGLO	Dactylis glomerata	DACTYLIS GLOMERATA	Orchard Grass	0	FACU	1
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne’s Lace	0	UPL	2
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	-1
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	1
ERIVIL	Eriochloa villosa	ERIOCHLOA VILLOSA	Chinese Cup Grass	0	UPL	2
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	0
FRAVIR	Fragaria virginiana	Fragaria virginiana	Virginia Strawberry	1	FACU	1
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	-1
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	0
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	1
HELHEL	Heliopsis helianthoides	Heliopsis helianthoides	Smooth Oxeye	5	FACU	1
IRIVIR	Iris virginica var. shrevei	Iris virginica shrevei	Virginia Blueflag	5	OBL	-2
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	4	FACW	-1
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	0
LOBSIP	Lobelia siphilitica	Lobelia siphilitica	Great Blue Lobelia	6	OBL	-2
LYSCIL	Lysimachia ciliata	Lysimachia ciliata	Fringed Yellow-Loosestrife	4	FACW	-1
LYSNUM	Lysimachia nummularia	LYSIMACHIA NUMMULARIA	Creeping-Jenny	0	FACW	-1
MEDLUP	Medicago lupulina	MEDICAGO LUPULINA	Black Medick	0	FACU	1
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	2
MELLOF	Melilotus officinalis	MELILOTUS ALBA	Yellow Sweet-Clover	0	FACU	1
MUHSCH	Muhlenbergia schreberi	Muhlenbergia schreberi	Nimblewill	0	FAC	0
OENBIE	Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	1
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	1
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	5	FAC	0
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	1
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	-1
PILPUM	Pilea pumila	Pilea pumila	Canadian Clearweed	5	FACW	-1
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	1
PLARUG	Plantago rugelii	Plantago rugelii	Black-Seed Plantain	0	FAC	0
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	0
PRUVULL	Prunella vulgaris ssp. lanceolata	Prunella vulgaris lanceolata	Common Selfheal	0	FAC	0
PRUAME	Prunus americana	Prunus americana	American Plum	5	UPL	2
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	0
RUBOCC	Rubus occidentalis	Rubus occidentalis	Black Raspberry	2	UPL	2
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	1
RUDLAC	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	-1
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	1
RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	1
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	0
SALINT	Salix interior	Salix interior	Sandbar Willow	1	FACW	-1
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	1
SETFAB	Setaria faberi	SETARIA FABERI	Japanese Bristle Grass	0	FACU	1

SETGLA	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	0
SOLDUL	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade	0	FAC	0
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	1
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	-1
SONARV	Sonchus arvensis	SONCHUS ARVENSIS	Field Sow-Thistle	0	FACU	1
SONASP	Sonchus asper	SONCHUS ASPER	Spiny-Leaf Sow-Thistle	0	FACU	1
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	1
ASTSAGD	Symphyotrichum drummondii	Aster sagittifolius drummondii	Drummond's Aster	2	UPL	2
ASTSIM	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3	FAC	0
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	-1
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	1
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	1
RHURAD	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	0
TRAOHI	Tradescantia ohiensis	Tradescantia ohiensis	Bluejacket	2	FACU	1
TRIHYB	Trifolium hybridum	TRIFOLIUM HYBRIDUM	Alsike Clover	0	FACU	1
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	1
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	1
ULMPUM	Ulmus pumila	ULMUS PUMILA	Siberian Elm	0	UPL	2
VERBLA	Verbascum blattaria	VERBASCUM BLATTARIA	White Moth Mullein	0	FACU	1
VERTHA	Verbascum thapsus	VERBASCUM THAPSUS	Woolly Mullein	0	UPL	2
VERALT	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	-1
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	0
ZIZAUR	Zizia aurea	Zizia aurea	Golden Alexanders	7	FAC	0

TRANSECT STRING

>

QUAD	1
SPECIES	COVER
ANECAN	5
ASTPIL	10
DAUCAR	10
FESELA	5
MELALB	10
RUDTRI	25
SETGLA	10
TRIHYB	25

>

QUAD	2
SPECIES	COVER
ANDGER	30
DAUCAR	5
ERIANN	10
MELALB	30
TAROFF	10
TRIHYB	20
VERBLA	5

>

QUAD	3
SPECIES	COVER
DAUCAR	10
ERIANN	10
OENBIE	5
POAPRA	10

RUDTRI	30
SETGLA	20
TRIHYB	50

>

QUAD	4
SPECIES	COVER
ALLPET	5
CONARV	5
ERIANN	2
RUMCRI	2

>

QUAD	5
SPECIES	COVER
DAUCAR	10
PLALAN	20
TAROFF	5
TRAOHI	5
TRIHYB	20

>

QUAD	6
SPECIES	COVER
ASTPIL	10
DAUCAR	10
ERIANN	30
OXASTR	5
PLALAN	10
RUMCRI	5
SETGLA	10
TRIHYB	10
VIOSOR	5

>

QUAD	7
SPECIES	COVER
CONARV	5
ERIANN	10
PLALAN	5
PLARUG	5
SETGLA	40
TRIHYB	10

>

QUAD	8
SPECIES	COVER
AGASCR	10
ASTPIL	10
DAUCAR	5
ERIANN	10
SETGLA	30
TAROFF	5

>

QUAD	9
SPECIES	COVER
BARVUL	5
CARNUT	5
ERIANN	20
SETGLA	30
TRIHYB	40

>

QUAD	10
SPECIES	COVER
ASTPIL	10
DAUCAR	10
ERIANN	10
POAPRA	10
SETGLA	30
TRIHYB	40
VERTHA	5

>

QUAD	11
SPECIES	COVER
ASTPIL	10
DAUCAR	20
ERIANN	10
SETGLA	20
TRIHYB	40

>

QUAD	12
SPECIES	COVER
ACARHO	5
AMBART	5
DAUCAR	10
FRAVIR	5
PLALAN	20
PLARUG	20
TRIHYB	20

>

QUAD	13
SPECIES	COVER
AGASCR	5
ASTPIL	5
DAUCAR	20
MELALB	30
RUMCRI	20
TAROFF	5
TRIHYB	10

>

QUAD	14
SPECIES	COVER
AGASCR	10
ERIANN	30
POAPRA	10
SETGLA	20
TRIHYB	10
VERTHA	10

>

QUAD	15
SPECIES	COVER
ANDGER	30
ANEVIR	5
CORRAC	5
FRAVIR	10
PRUAME	10
SOLCAN	20

>

QUAD	16

SPECIES	COVER
DAUCAR	5
PLALAN	20
PLARUG	20
RUDTRI	30
TRIHYB	40

>

QUAD	17
SPECIES	COVER
DAUCAR	5
ERIANN	5
MELALB	40
PLALAN	10
PLARUG	10
POAPRA	20
RUDTRI	20
TRIPRA	2

>

QUAD	18
SPECIES	COVER
RUDTRI	40
RUMCRI	5
SETGLA	10
TRIHYB	60

>

QUAD	19
SPECIES	COVER
ACARHO	10
CIRVUL	5
ERIANN	30
POAPRA	20
RUDTRI	10
TRIPRA	20

>

QUAD	20
SPECIES	COVER
DAUCAR	10
RUDTRI	50
SETGLA	40

>

QUAD	21
SPECIES	COVER
DAUCAR	5
ERIANN	10
PLARUG	20
SETGLA	10
SOLCAN	5
TRIHYB	40

>

QUAD	22
SPECIES	COVER
ASTPIL	5
DAUCAR	5
ERIANN	5
MELALB	10
PLARUG	5
RUDTRI	10

SETGLA	20
TRIHYB	50
>	
QUAD	23
SPECIES	COVER
ASTPIL	5
BROINE	20
DAUCAR	5
ERIANN	10
MELALB	20
SOLCAN	10
TRIHYB	5
>	
QUAD	24
SPECIES	COVER
AGASCR	10
ANDGER	10
ASTPIL	10
PLARUG	5
POAPRA	5
TRIHYB	10
>	
QUAD	25
SPECIES	COVER
AGRALB	10
AMBART	5
ASTPIL	10
ERIANN	10
POAPRA	5
RUDTRI	5
SETGLA	10
TRIHYB	30
VERTHA	5
>	
QUAD	26
SPECIES	COVER
ANDGER	5
ASTPIL	10
ERIANN	15
LOBSIP	5
SOLCAN	5
TRIHYB	40
>	
QUAD	27
SPECIES	COVER
AGASCR	40
ASTPIL	5
ERIANN	5
MELALB	20
SETGLA	5
TRIHYB	10
>	
QUAD	28
SPECIES	COVER
AMBART	5
ASTPIL	10
ERIANN	10

PHAARU 10
RUMCRI 5
SETGLA 10
TRIHYB 30
>
QUAD 29
SPECIES COVER
AMBART 15
ASTPIL 10
ERIANN 15
SETGLA 15
TRIHYB 10
>
QUAD 30
SPECIES COVER
AMBART 20
SETGLA 5
TRIHYB 25
>
QUAD 31
SPECIES COVER
AGASCR 10
AMBART 10
ASTPIL 5
DAUCAR 5
TRIHYB 70
>
QUAD 32
SPECIES COVER
AGRALB 5
ERIANN 10
MELALB 30
TRIHYB 50
>
QUAD 33
SPECIES COVER
AGRALB 5
AMBART 20
ASTPIL 5
DAUCAR 5
MELALB 10
RUMCRI 5
TRIHYB 50
>
QUAD 34
SPECIES COVER
AMBART 5
DAUCAR 5
PLARUG 40
SETGLA 2
TRIHYB 50
>
QUAD 35
SPECIES COVER
AMBART 20
DAUCAR 5
GEUCAN 5

RUMCRI	25
TRIHYB	20

>

QUAD	36
SPECIES	COVER
DAUCAR	10
ERIANN	5
GEUCAN	10
POAPRA	5
SONARV	5
TRIHYB	30

>

QUAD	37
SPECIES	COVER
ASTPIL	10
CIRVUL	5
CXBLAN	10
DAUCAR	20
ERIANN	20
GEUCAN	5
TRIHYB	30

>

QUAD	38
SPECIES	COVER
CXBLAN	10
DAUCAR	20
MELALB	5
PARQUI	5
PLARUG	10
POAPRA	30
PRUVULL	5
SOLCAN	20
TRIPRA	10

>

QUAD	39
SPECIES	COVER
DAUCAR	5
MELALB	30
TAROFF	5
TRIHYB	30
VERTHA	5

>

QUAD	40
SPECIES	COVER
ASTPIL	10
ERIANN	10
MELALB	10
TRIHYB	20
TRIPRA	20

>

QUAD	41
SPECIES	COVER
AMBART	10
ERIVIL	10
SETGLA	20
TRIHYB	40

>

QUAD	42
SPECIES	COVER
ERIANN	20
MELALB	10
PLARUG	5
TRIHYB	20

>

QUAD	43
SPECIES	COVER
ERIANN	15
MELALB	20

>

QUAD	44
SPECIES	COVER
AMBART	10
ASTPIL	20
BARVUL	5
DAUCAR	5
SETGLA	20
TAROFF	5
TRIHYB	30

>

QUAD	45
SPECIES	COVER
DAUCAR	5
ERIANN	20
MELALB	20
TRIHYB	30

>

QUAD	46
SPECIES	COVER
AMBART	1
DAUCAR	8
ERIANN	3
MELLOF	6
RUMCRI	4
TRIPRA	4
TRIREP	6

>

QUAD	47
SPECIES	COVER
ANDGER	30
ERIVIL	6
HELHEL	2
PLARUG	4
POAPRA	30
SETFAB	2

>

QUAD	48
SPECIES	COVER
ANDGER	10
CXBLAN	6
CXSCOP	8
DAUCAR	6
ERIVIL	6
GLEHED	3
PLARUG	5

POAPRA	20
SETFAB	2
TRIREP	10
>	
QUAD	49
SPECIES	COVER
ANDGER	20
ASTLAT	2
CXBLAN	3
DAUCAR	12
MEDLUP	12
PLALAN	2
PLARUG	10
POAPRA	10
SETFAB	2
SOLCAN	5
TAROFF	2
TRIPRA	10
>	
QUAD	50
SPECIES	COVER
ANDGER	20
ASTLAT	4
CXBLAN	4
DAUCAR	15
ERIANN	3
MEDLUP	6
PANVIR	8
PLARUG	3
POAPRA	6
RUDHIR	2
SOLCAN	6
TAROFF	6
TRIPRA	15
>	
QUAD	51
SPECIES	COVER
ANDGER	4
CXBLAN	10
DACGLO	5
DAUCAR	2
ERIVIL	8
GLEHED	2
PLARUG	6
POAPRA	4
RUDHIR	1
RUDSUB	2
SETGLA	3
TRIHYB	35
>	
QUAD	52
SPECIES	COVER
CXBLAN	2
MEDLUP	15
RUDSUB	15
TAROFF	2
TRIREP	10

>
 QUAD 53
SPECIES COVER
DAUCAR 15
MEDLUP 25
MELLOF 4
PLARUG 8
TRIPRA 20
ULMPUM 3
>
 QUAD 54
SPECIES COVER
ANECAN 2
DAUCAR 8
ELYVIR 3
ERIVIL 2
GEUCAN 2
GLEHED 2
PLARUG 3
POAPRA 3
RUDSUB 8
SETGLA 2
TRIHYB 6
>
 QUAD 55
SPECIES COVER
ANECAN 30
DAUCAR 40
TRIPRA 8
>
 QUAD 56
SPECIES COVER
AMBART 4
CXBLAN 2
DAUCAR 6
ERIANN 2
MEDLUP 4
MELLOF 5
MUHSCH 4
OXASTR 3
PLARUG 20
RUDHIR 6
SOLCAN 2
TAROFF 4
TRIPRA 6
TRIREP 8
>
 QUAD 57
SPECIES COVER
ANECAN 8
DAUCAR 8
FRAVIR 2
JUNTEN 3
PLARUG 2
RUDHIR 2
SOLCAN 2
TRIPRA 4

TRIREP	10
>	
QUAD	58
SPECIES	COVER
AMBART	2
ANECAN	4
DAUCAR	3
ERIVIL	2
FESELA	20
MEDLUP	3
POAPRA	6
RUDSUB	3
SOLCAN	3
SORNUT	25
TRIPRA	6
>	
QUAD	59
SPECIES	COVER
ASTSAGD	4
DAUCAR	2
PARQUI	4
POAPRA	35
RHACAT	2
RHURAD	3
RUBOCC	3
RUDSUB	40
SOLCAN	3
TAROFF	4
VIOSOR	2
>	
QUAD	60
SPECIES	COVER
ASTLAT	2
ELYVIR	3
MUHSCH	8
RUDSUB	8
SOLCAN	2
TAROFF	4
>	
QUAD	61
SPECIES	COVER
BIDFRO	2
CXCRIS	4
DAUCAR	2
MEDLUP	2
RHACAT	10
RUDSUB	35
SOLCAN	6
TRIHYB	6
>	
QUAD	62
SPECIES	COVER
ASTLAT	8
CALCAN	5
CXLACU	30
FRAPEN	6
LYSCIL	10

PHAARU	2
SOLCAN	3
SONASP	2
VERALT	10
VIOSOR	3
ZIZAUR	15

>

QUAD	63
SPECIES	COVER
ANECAN	4
ASTLAT	2
CALCAN	85
LYSCIL	10
RUDLAC	10
SOLCAN	8
VIOSOR	2

>

QUAD	64
SPECIES	COVER
ASTLAT	3
CALCAN	50
CXVULP	10
JUNDUD	6
RHACAT	2
RUDLAC	8
SALINT	15
SOLCAN	10
SOLGIG	6
ZIZAUR	7

>

QUAD	65
SPECIES	COVER
ASTSIM	15
BIDFRO	3
EUPSER	8
IRIVIR	8
LYSNUM	8
PHAARU	8
PILPUM	10
RUDLAC	4
SALINT	15
SOLCAN	6
SOLDUL	3

>

SITE: WCERT
LOCALE: 5D Mack Rd. Staging Area
BY: WS, CC, KC, WO
NOTES: 9/14/2017

TRANSECT QUADRAT QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	
T1-1	3	3	4.24	4.24	0.5	0.5	2	2	
T1-10	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-11	4	4	8.94	8.94	0	0	5	5	
T1-12	4	4	6.93	6.93	0.33	0.33	3	3	
T1-13	2.33	2.33	4.04	4.04	1	1	3	3	
T1-14	4.25	4.25	8.5	8.5	0.75	0.75	4	4	
T1-15	5	5	5	5	0	0	1	1	
T1-16	5	5	7.07	7.07	0.5	0.5	2	2	
T1-17	3.25	3.25	6.5	6.5	0.25	0.25	4	4	
T1-18	3.25	3.25	6.5	6.5	0.25	0.25	4	4	
T1-19	4	4	6.93	6.93	0.33	0.33	3	3	
T1-2	4	4	8	8	0.75	0.75	4	4	
T1-20	3.25	3.25	6.5	6.5	0.5	0.5	4	4	
T1-21	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-22	3	3	6.71	6.71	0	0	5	5	
T1-23	5	5	5	5	0	0	1	1	
T1-24	4.5	4.5	9	9	0	0	4	4	
T1-25	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-26	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-27	4	4	6.93	6.93	0	0	3	3	
T1-28	5	5	8.66	8.66	0.33	0.33	3	3	
T1-29	3.25	2.6	6.5	5.81	0.5	0.8	4	5	
T1-3	4	4	8.94	8.94	0.6	0.6	5	5	
T1-30	5	2.5	7.07	5	0.5	0.75	2	4	
T1-31	3.2	3.2	7.16	7.16	0.6	0.6	5	5	
T1-32	5.75	4.6	11.5	10.29	0	-0.2	4	5	
T1-33	5	5	7.07	7.07	0.5	0.5	2	2	
T1-34	3.75	3	7.5	6.71	0.25	0.6	4	5	
T1-35	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-36	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-37	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-38	3.67	2.75	6.35	5.5	0.67	0.5	3	4	
T1-39	4.67	3.5	8.08	7	0	0.5	3	4	
T1-4	4.17	4.17	10.21	10.21	0.83	0.83	6	6	
T1-40	3.25	3.25	6.5	6.5	0.25	0.25	4	4	
T1-41	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-42	3.67	3.67	6.35	6.35	0.67	0.67	3	3	
T1-43	5	3.33	7.07	5.77	0.5	0.67	2	3	
T1-44	5	3.33	7.07	5.77	0.5	1	2	3	
T1-45	2.67	1.6	4.62	3.58	1	1.2	3	5	
T1-46	5	1.67	5	2.89	1	1.33	1	3	
T1-5	2.25	1.5	4.5	3.67	1	1	4	6	
T1-6	4.25	2.43	8.5	6.43	1	1.14	4	7	
T1-7	4	2.4	6.93	5.37	1.33	1.2	3	5	
T1-8	4	4	6.93	6.93	0.33	0.33	3	3	
T1-9	3.4	3.4	7.6	7.6	-0.2	-0.2	5	5	
AVG	3.94	3.52	6.91	6.54	0.49	0.54	3.28	3.72	

STD	0.78	0.88	1.47		1.58	0.34	0.37	1.11	1.26

TRANSECT SUMMARY

C	NUMBER					
					25	NATIVE SPECIES
0	2				34	TOTAL SPECIES
1	3				3.44	NATIVE MEAN C
2	4				2.53	W/Adventives
3	2		0:	8.00%	17.2	NATIVE FQI
4	5		1 to 3:	36.00%	14.75	W/Adventives
5	8		4 to 7:	52.00%	0.24	NATIVE MEAN W
6	0		8 to 10:	4.00%	0.5	W/Adventives
7	0					
8	0					
9	1					
10	0					

PHYSIOGNOMIC SUMMARY

PHYSIOGNOMY

NATIVE	25	73.53%	ADVENTIVE	9	26.47%
Tree	8	23.53%	Tree	1	2.94%
Shrub	1	2.94%	Shrub	1	2.94%
Vine	0	0.00%	Vine	0	0.00%
Forb	13	38.24%	Forb	2	5.88%
Grass	3	8.82%	Grass	5	14.71%
Sedge	0	0.00%	Sedge	0	0.00%
Fern	0	0.00%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOG	FRQ	COV	RFRQ	RCOV	RIV
N Tree	13	125	7.6	2.8	5.2
N Shrub	2	20	1.2	0.4	0.8
N Forb	50	612	29.2	13.7	21.4
N Grass	86	3259	50.3	72.7	61.5
A Tree	2	10	1.2	0.2	0.7
A Shrub	2	30	1.2	0.7	0.9
A Forb	6	50	3.5	1.1	2.3
A Grass	10	375	5.8	8.4	7.1

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME (NWPL/MOHLENBROCK)	**C**	**WETNESS**	**FRQ**	**COV**	**RFRQ**	**RCOV**	**RIV**
Andropogon gerardii	5	FAC	41	1905	24	42.5	33.2
Sorghastrum nutans	5	FACU	40	1249	23.4	27.9	25.6
Solidago canadensis	1	FACU	25	390	14.6	8.7	11.7
Poa pratensis	0	FAC	5	190	2.9	4.2	3.6
Schedonorus pratensis	0	FACU	2	150	1.2	3.3	2.3
Panicum virgatum	5	FAC	5	105	2.9	2.3	2.6
Helianthus grosseserratus	2	FACW	5	50	2.9	1.1	2
Quercus coccinea	4	UPL	2	40	1.2	0.9	1
Rudbeckia triloba	3	FACU	4	35	2.3	0.8	1.6

Desmodium canadense	4	FACU	2	32	1.2	0.7	0.9
Silphium integrifolium	5	UPL	2	30	1.2	0.7	0.9
Elaeagnus umbellata	0	UPL	2	30	1.2	0.7	0.9
Melilotus albus	0	UPL	4	30	2.3	0.7	1.5
Populus deltoides	2	FAC	3	25	1.8	0.6	1.2
Quercus macrocarpa	5	FAC	2	25	1.2	0.6	0.9
Persicaria amphibia	4	OBL	2	20	1.2	0.4	0.8
Symphyotrichum pilosum	0	FACU	3	20	1.8	0.4	1.1
Agrostis gigantea	0	FACW	1	20	0.6	0.4	0.5
Corylus americana	5	FACU	2	20	1.2	0.4	0.8
Daucus carota	0	UPL	2	20	1.2	0.4	0.8
Apocynum cannabinum	2	FAC	2	10	1.2	0.2	0.7
Rhus hirta	1	UPL	1	10	0.6	0.2	0.4
Ulmus americana	3	FACW	2	10	1.2	0.2	0.7
Ulmus pumila	0	UPL	2	10	1.2	0.2	0.7
Bromus inermis	0	FACU	1	10	0.6	0.2	0.4
Juglans nigra	5	FACU	1	5	0.6	0.1	0.3
Fraxinus pennsylvanica	1	FACW	1	5	0.6	0.1	0.3
Crataegus mollis	2	FAC	1	5	0.6	0.1	0.3
Verbena urticifolia	5	FAC	1	5	0.6	0.1	0.3
Eryngium yuccifolium	9	FAC	1	5	0.6	0.1	0.3
Symphyotrichum lateriflorum	4	FACW	1	5	0.6	0.1	0.3
Juncus tenuis	0	FAC	1	5	0.6	0.1	0.3
Symphyotrichum novae-angliae	4	FACW	1	5	0.6	0.1	0.3
Tridens flavus	0	UPL	1	5	0.6	0.1	0.3
			171	4481			

TRANSECT INVENTORY

Acronym	Scientific Name (NWPL/Mohlenbrock)	Scientific Name Synonym (Swink & Wilhelm)	Common Name (NWPL/Mohlenbrock)	C	WETNESS	WETNESS VALUE
AGRALB	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	-1
ANDGER	Andropogon gerardii	Andropogon gerardii	Big Bluestem	5	FAC	0
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	0
BROINE	Bromus inermis	BROMUS INERMIS	Smooth Brome	0	FACU	1
CORAME	Corylus americana	Corylus americana	American Hazelnut	5	FACU	1
CRAMOL	Crataegus mollis	Crataegus mollis	Downy Hawthorn	2	FAC	0
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne's Lace	0	UPL	2
DESCAA	Desmodium canadense	Desmodium canadense	Showy Tick-Trefoil	4	FACU	1
ELAUMB	Elaeagnus umbellata	ELAEAGNUS UMBELLATA	Autumn-Olive	0	UPL	2
ERYYUC	Eryngium yuccifolium	Eryngium yuccifolium	Button Eryngo	9	FAC	0
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	-1
HELGRO	Helianthus grosseserratus	Helianthus grosseserratus	Saw-Tooth Sunflower	2	FACW	-1
JUGNIG	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	1
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	0
MELALB	Melilotus albus	MELILOTUS ALBA	White Sweet-Clover	0	UPL	2
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	5	FAC	0
POLAMP	Persicaria amphibia	Polygonum coccineum; Polygonum amphibium stipulaceum	Water Smartweed	4	OBL	-2
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	0
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	0
QUECOC	Quercus coccinea	Quercus coccinea	Scarlet Oak	4	UPL	2
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	0
RHUTYP	Rhus hirta	Rhus typhina	Staghorn Sumac	1	UPL	2

RUDTRI	Rudbeckia triloba	Rudbeckia triloba	Brown-Eyed-Susan	3	FACU	1
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	1
SILINT	Silphium integrifolium	Silphium integrifolium deamii	Entire-Leaf Rosinweed	5	UPL	2
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	1
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	1
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	-1
ASTNOV	Symphyotrichum novae-angliae	Aster novae-angliae	New England American-Aster	4	FACW	-1
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	1
TRIFLA	Tridens flavus	TRIODIA FLAVA	Purple-Top	0	UPL	2
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	-1
ULMPUM	Ulmus pumila	ULMUS PUMILA	Siberian Elm	0	UPL	2
VERURT	Verbena urticifolia	Verbena urticifolia leiocarpa	White Vervain	5	FAC	0

TRANSECT STRING

```
>
  QUAD          1
SPECIES         COVER
ANDGER          20
SOLCAN          30
>
  QUAD          2
SPECIES         COVER
ANDGER          40
SOLCAN          20
SORNUT          20
>
  QUAD          3
SPECIES         COVER
ANDGER          20
PANVIR          20
POLAMP          10
SOLCAN          20
SORNUT          30
>
  QUAD          4
SPECIES         COVER
ANDGER          50
APOCAN          5
SORNUT          30
>
  QUAD          5
SPECIES         COVER
ANDGER          30
RHUTYP          10
SOLCAN          40
>
  QUAD          6
SPECIES         COVER
ANDGER          30
POPDEL          10
SILINT          20
SORNUT          40
>
```

QUAD	7
SPECIES	COVER
ANDGER	100
>	
QUAD	8
SPECIES	COVER
ANDGER	100
SORNUT	10
>	
QUAD	9
SPECIES	COVER
ANDGER	40
HELGRO	5
SOLCAN	10
SORNUT	25
>	
QUAD	10
SPECIES	COVER
ANDGER	30
HELGRO	5
SOLCAN	10
SORNUT	45
>	
QUAD	11
SPECIES	COVER
ANDGER	80
POPDEL	5
SORNUT	20
>	
QUAD	12
SPECIES	COVER
ANDGER	50
JUGNIG	5
SOLCAN	10
SORNUT	20
>	
QUAD	13
SPECIES	COVER
ANDGER	35
APOCAN	5
SOLCAN	5
SORNUT	45
>	
QUAD	14
SPECIES	COVER
ANDGER	80
SOLCAN	5
SORNUT	20
>	
QUAD	15
SPECIES	COVER
ANDGER	50
FRAPEN	5
SOLCAN	5
SORNUT	50
ULMAME	5
>	

QUAD	16
SPECIES	COVER
ANDGER	100
>	
QUAD	17
SPECIES	COVER
ANDGER	60
PANVIR	10
SORNUT	30
ULMAME	5
>	
QUAD	18
SPECIES	COVER
ANDGER	80
SOLCAN	5
SORNUT	10
>	
QUAD	19
SPECIES	COVER
ANDGER	80
SOLCAN	5
SORNUT	10
>	
QUAD	20
SPECIES	COVER
ANDGER	25
HELGRO	10
SORNUT	35
>	
QUAD	21
SPECIES	COVER
ANDGER	20
PANVIR	10
SORNUT	70
>	
QUAD	22
SPECIES	COVER
ANDGER	90
CRAMOL	5
SOLCAN	10
SORNUT	10
ULMPUM	5
>	
QUAD	23
SPECIES	COVER
ANDGER	40
DESCAA	2
QUEMAC	5
SOLCAN	10
SORNUT	20
>	
QUAD	24
SPECIES	COVER
PANVIR	35
POAPRA	30
SORNUT	20
ULMPUM	5

>
QUAD 25
SPECIES COVER
ANDGER 30
ASTPIL 5
SOLCAN 30
SORNUT 4
VERURT 5
>
QUAD 26
SPECIES COVER
AGRALB 20
ANDGER 40
ASTLAT 5
ERYYUC 5
SORNUT 30
>
QUAD 27
SPECIES COVER
ANDGER 50
SORNUT 50
>
QUAD 28
SPECIES COVER
ANDGER 10
ELAUMB 20
JUNTEN 5
PANVIR 30
SORNUT 20
>
QUAD 29
SPECIES COVER
ANDGER 40
SOLCAN 30
SORNUT 30
>
QUAD 30
SPECIES COVER
ANDGER 40
SOLCAN 20
SORNUT 50
>
QUAD 31
SPECIES COVER
ANDGER 40
SOLCAN 10
SORNUT 50
>
QUAD 32
SPECIES COVER
ANDGER 50
POAPRA 10
SOLCAN 5
SORNUT 40
>
QUAD 33
SPECIES COVER

ANDGER	30
ASTNOV	5
ELAUMB	10
SORNUT	40

>

QUAD	34
SPECIES	COVER
ANDGER	20
DESCAA	30
QUEMAC	20
SILINT	10
SOLCAN	10
SORNUT	20

>

QUAD	35
SPECIES	COVER
ANDGER	30
HELGRO	20
SOLCAN	10
SORNUT	40

>

QUAD	36
SPECIES	COVER
ANDGER	30
SOLCAN	40
SORNUT	40

>

QUAD	37
SPECIES	COVER
ANDGER	30
SOLCAN	30
SORNUT	30

>

QUAD	38
SPECIES	COVER
ANDGER	5
BROINE	10
SORNUT	90

>

QUAD	39
SPECIES	COVER
ANDGER	50
MELALB	5
SORNUT	20

>

QUAD	40
SPECIES	COVER
ASTPIL	10
FESELA	50
RUDTRI	5
SORNUT	20
TRIFLA	5

>

QUAD	41
SPECIES	COVER
FESELA	100
MELALB	5

SORNUT 5
>
QUAD 42
SPECIES COVER
ASTPIL 5
CORAME 10
MELALB 10
POAPRA 50
RUDTRI 10
SOLCAN 10
>
QUAD 43
SPECIES COVER
ANDGER 50
CORAME 10
DAUCAR 10
MELALB 10
POAPRA 70
QUECOC 20
RUDTRI 10
>
QUAD 44
SPECIES COVER
DAUCAR 10
POAPRA 30
QUECOC 20
RUDTRI 10
SORNUT 50
>
QUAD 45
SPECIES COVER
ANDGER 50
POPDEL 10
SORNUT 40
>
QUAD 46
SPECIES COVER
ANDGER 60
HELGRO 10
POLAMP 10
SOLCAN 10
SORNUT 20
>

SITE: WCERT
LOCALE: Mack Rd. Upland Savannah
BY: WS, CC, KC, WO
NOTES: 9/14/2017

TRANSECT QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS
T2-1	0.5	0.13	0.71	0.35	1	1.13	2	8
T2-10	4.67	2.33	8.08	5.72	0.67	0.67	3	6
T2-11	4.33	3.25	10.61	9.19	0	0.5	6	8
T2-12	2	1	4.47	3.16	0.8	1	5	10
T2-13	4	0.57	4	1.51	1	1.43	1	7
T2-2	4.33	1.86	7.51	4.91	0.33	0.57	3	7
T2-3	3.83	2.56	9.39	7.67	0.5	0.89	6	9
T2-4	2	1.25	4.47	3.54	0	0.63	5	8
T2-5	3.5	2.8	7	6.26	0.5	0.8	4	5
T2-6	3.8	2.11	8.5	6.33	0.4	0.78	5	9
T2-7	6	2.25	10.39	6.36	1	1.13	3	8
T2-8	5.67	2.43	9.81	6.43	0.33	0.57	3	7
T2-9	3	2	6	4.9	0.25	0.67	4	6
AVG	3.66	1.89	7	5.1	0.52	0.83	3.85	7.54
STD	1.52	0.91	2.95	2.44	0.35	0.27	1.52	1.39

TRANSECT SUMMARY

C	NUMBER					
0	6			18	NATIVE SPECIES	
1	3			35	TOTAL SPECIES	
2	1			2.5	NATIVE MEAN C	
3	1	0:	33.33%	1.29	W/Adventives	
4	3	1 to 3:	27.78%	10.61	NATIVE FQI	
5	2	4 to 7:	33.33%	7.61	W/Adventives	
6	1	8 to 10:	5.56%	0.28	NATIVE MEAN W	
7	0			0.6	W/Adventives	
8	0					
9	1					
10	0					

PHYSIOGNOMIC SUMMARY

PHYSIOGNOMY

NATIVE	18	51.43%	ADVENTIVE	17	48.57%
Tree	0	0.00%	Tree	0	0.00%
Shrub	0	0.00%	Shrub	0	0.00%
Vine	0	0.00%	Vine	0	0.00%
Forb	14	40.00%	Forb	9	25.71%
Grass	4	11.43%	Grass	8	22.86%
Sedge	0	0.00%	Sedge	0	0.00%
Fern	0	0.00%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOG	FRQ	COV	RFRQ	RCOV	RIV
N Forb	32	185	32.7	14.9	23.8
N Grass	18	361	18.4	29.2	23.8
A Forb	15	69	15.3	5.6	10.4
A Grass	33	623	33.7	50.3	42

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME (NWPL/MOHLENBROCK)	**C**	**WETNESS**	**FRQ**	**COV**	**RFRQ**	**RCOV**	**RIV**
Eriochloa villosa	0	UPL	13	446	13.3	36	24.6
Elymus canadensis	4	FACU	9	256	9.2	20.7	14.9
Rudbeckia subtomentosa	9	FACU	7	93	7.1	7.5	7.3
Elymus virginicus	4	FACW	6	93	6.1	7.5	6.8
Setaria viridis	0	UPL	8	55	8.2	4.4	6.3
Poa pratensis	0	FAC	4	39	4.1	3.2	3.6
Festuca rubra	0	FACU	2	38	2	3.1	2.6
Heliopsis helianthoides	5	FACU	4	24	4.1	1.9	3
Phalaris arundinacea	0	FACW	2	19	2	1.5	1.8
Plantago lanceolata	0	FACU	2	18	2	1.5	1.7
Rumex crispus	0	FAC	2	16	2	1.3	1.7
Elymus repens	0	FACU	1	10	1	0.8	0.9
Rudbeckia hirta	1	FACU	2	10	2	0.8	1.4
Ambrosia artemisiifolia	0	FACU	3	9	3.1	0.7	1.9
Geum canadense	1	FAC	3	9	3.1	0.7	1.9
Sorghastrum nutans	5	FACU	2	9	2	0.7	1.4
Schedonorus pratensis	0	FACU	1	8	1	0.6	0.8
Taraxacum officinale	0	FACU	3	8	3.1	0.6	1.9
Symphyotrichum lateriflorum	4	FACW	2	8	2	0.6	1.3
Bromus arvensis	0	FACU	2	8	2	0.6	1.3
Sonchus asper	0	FACU	2	8	2	0.6	1.3
Trifolium pratense	0	FACU	2	7	2	0.6	1.3
Symphyotrichum pilosum	0	FACU	2	6	2	0.5	1.3
Viola sororia	3	FAC	2	6	2	0.5	1.3
Oxalis stricta	0	FACU	2	5	2	0.4	1.2
Lobelia siphilitica	6	OBL	1	4	1	0.3	0.7
Trifolium repens	0	FACU	1	4	1	0.3	0.7
Medicago lupulina	0	FACU	1	4	1	0.3	0.7
Solidago canadensis	1	FACU	1	4	1	0.3	0.7
Erigeron canadensis	0	FACU	1	3	1	0.2	0.6
Muhlenbergia schreberi	0	FAC	1	3	1	0.2	0.6
Erigeron annuus	0	FACU	1	3	1	0.2	0.6
Daucus carota	0	UPL	1	2	1	0.2	0.6
Verbascum blattaria	0	FACU	1	2	1	0.2	0.6
Persicaria hydropiper	2	OBL	1	1	1	0.1	0.6
			98	1238			

TRANSECT INVENTORY

Acronym	Scientific Name (NWPL/Mohlenbrock)	Scientific Name Synonym (Swink & Wilhelm)	Common Name (NWPL/Mohlenbrock)	C	WETNESS	WETNESS VALUE
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	1
BROJAP	Bromus arvensis	BROMUS JAPONICUS	Field Brome	0	FACU	1
DAUCAR	Daucus carota	DAUCUS CAROTA	Queen Anne's Lace	0	UPL	2
ELYCAN	Elymus canadensis	Elymus canadensis	Nodding Wild Rye	4	FACU	1
AGRREP	Elymus repens	AGROPYRON REPENS	Creeping Wild Rye	0	FACU	1
ELYVIR	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	-1
ERIANN	Erigeron annuus	Erigeron annuus	Eastern Daisy Fleabane	0	FACU	1
ERICAN	Erigeron canadensis	Erigeron canadensis	Canadian Horseweed	0	FACU	1
ERIVIL	Eriochloa villosa	ERIOCHLOA VILLOSA	Chinese Cup Grass	0	UPL	2
FESRUB	Festuca rubra	FESTUCA RUBRA	Red Fescue	0	FACU	1
GEUCAN	Geum canadense	Geum canadense	White Avens	1	FAC	0
HELHEL	Heliopsis helianthoides	Heliopsis helianthoides	Smooth Oxeye	5	FACU	1
LOBSIP	Lobelia siphilitica	Lobelia siphilitica	Great Blue Lobelia	6	OBL	-2
MEDLUP	Medicago lupulina	MEDICAGO LUPULINA	Black Medick	0	FACU	1
MUHSCH	Muhlenbergia schreberi	Muhlenbergia schreberi	Nimblewill	0	FAC	0
OXASTR	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	1
PERHYR	Persicaria hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	-2
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	-1
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	1
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	0
RUDHIR	Rudbeckia hirta	Rudbeckia hirta	Black-Eyed-Susan	1	FACU	1
RUDSUB	Rudbeckia subtomentosa	Rudbeckia subtomentosa	Sweet Coneflower	9	FACU	1
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	0
FESELA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow Fescue	0	FACU	1
SETVIR	Setaria viridis	SETARIA VIRIDIS	Green Foxtail	0	UPL	2
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	1
SONASP	Sonchus asper	SONCHUS ASPER	Spiny-Leaf Sow-Thistle	0	FACU	1
SORNUT	Sorghastrum nutans	Sorghastrum nutans	Yellow Indian Grass	5	FACU	1
ASTLAT	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4	FACW	-1
ASTPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	1
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	1
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	1
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	1
VERBLA	Verbascum blattaria	VERBASCUM BLATTARIA	White Moth Mullein	0	FACU	1
VIOSOR	Viola sororia	Viola sororia	Hooded Blue Violet	3	FAC	0

TRANSECT STRING

```
>
 QUAD        1
SPECIES      COVER
AGRREP       10
AMBART       3
ERIVIL       20
FESELA       8
PLALAN       10
POAPRA       15
RUDHIR       2
SETVIR       4
>
 QUAD        2
```

SPECIES	COVER
ELYCAN	35
ERIVIL	30
GEUCAN	3
PHAARU	15
RUDSUB	10
TAROFF	2

>

QUAD	3
SPECIES	COVER
ASTLAT	6
ASTPIL	2
ELYCAN	15
ERIVIL	6
LOBSIP	4
RUDSUB	40
SETVIR	8
VIOSOR	4

>

QUAD	4
SPECIES	COVER
AMBART	4
ERICAN	3
ERIVIL	45
MUHSCH	3
POAPRA	4
RUDHIR	8
RUDSUB	6
SETVIR	6
TRIPRA	4
TRIREP	4

>

QUAD	5
SPECIES	COVER
DAUCAR	2
ELYCAN	6
ERIVIL	10
FESRUB	35
PLALAN	8
SETVIR	4
VERBLA	2

>

QUAD	6
SPECIES	COVER
BROJAP	2
ELYCAN	20
ELYVIR	25
ERIVIL	35
HELHEL	2
PHAARU	4
TAROFF	2

>

QUAD	7
SPECIES	COVER
ASTPIL	4
BROJAP	6
ELYCAN	60

ELYVIR	15
ERIVIL	20
GEUCAN	2
RUDSUB	3
SETVIR	8
SORNUT	4

>

QUAD	8
SPECIES	COVER
AMBART	2
ELYCAN	25
ELYVIR	30
ERIVIL	40
OXASTR	3
PERHYR	1
SETVIR	2
TRIPRA	3

>

QUAD	9
SPECIES	COVER
ELYVIR	4
ERIANN	3
ERIVIL	80
HELHEL	8
SORNUT	5

>

QUAD	10
SPECIES	COVER
ELYVIR	15
ERIVIL	20
GEUCAN	4
HELHEL	6
OXASTR	2
POAPRA	12
RUDSUB	20
SETVIR	20
SONASP	4

>

QUAD	11
SPECIES	COVER
ELYCAN	25
ERIVIL	45
FESRUB	3
HELHEL	8
RUDSUB	6
RUMCRI	10
SETVIR	3
SONASP	4

>

QUAD	12
SPECIES	COVER
ASTLAT	2
ELYCAN	40
ERIVIL	35
MEDLUP	4
POAPRA	8
RUDSUB	8

RUMCRI	6
>	
QUAD	13
SPECIES	COVER
ELYCAN	30
ELYVIR	4
ERIVIL	60
SOLCAN	4
TAROFF	4
VIOSOR	2
>	

2017 Annual Monitoring Report

Reaches 5D, 5E, 8, and
the Mack Road Staging Area
of the Kress Creek /

West Branch DuPage River Site

Appendix D

Transect Photos & Locations
(9.14.2017-9.15.2017)
Stream Monitoring
Photos & Locations

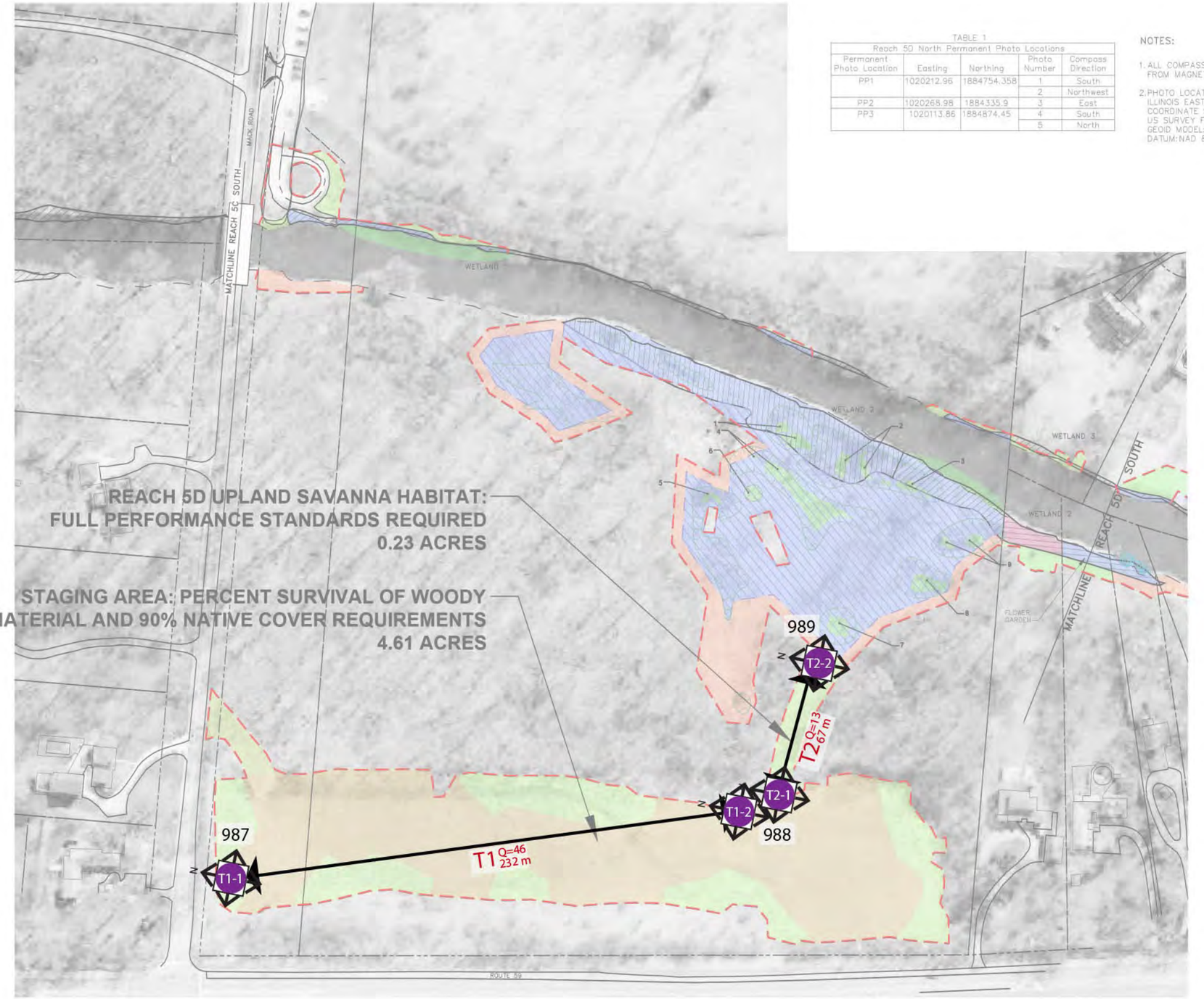


TABLE 1
Reach 5D North Permanent Photo Locations

Permanent Photo Location	Easting	Northing	Photo Number	Compass Direction
PP1	1020212.96	1884754.358	1	South
			2	Northwest
PP2	1020268.98	1884335.9	3	East
PP3	1020113.86	1884874.45	4	South
			5	North

NOTES:

1. ALL COMPASS DIRECTIONS ARE FROM MAGNETIC NORTH.
2. PHOTO LOCATIONS ARE IN THE ILLINOIS EAST STATE PLANE COORDINATE SYSTEM IN UNITS OF US SURVEY FEET. GEOID MODEL: GEOID 96 (CONUS) DATUM: NAD 83

LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- PROPERTY LINE
- APPROXIMATE EDGE OF WATER
- POOL
- RIFFLE
- 8 HOLLOW
- WETLAND BOUNDARY
- WET MEADOW WETLAND
- FORESTED WETLAND
- MITIGATION WETLAND
- RESTORED UPLAND SAVANNA
- RESTORED UPLAND SAVANNA AND FERMI LABS SEED
- RESTORED FERMI LABS SEED
- RESTORED WETLAND
- AREA RESTORED WITH PLANT PLUGS
- RESTORED SHADY FLOODPLAIN
- RESTORED LAWN
- RESTORED BENTGRASS

- SURVEY POINT
- TRANSECT PHOTOGRAPHS
- TRANSECT
- Q QUADRAT
- 1 START
- 2 END

NOTE:

1. BASE MAP PROVIDED BY: KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. (NOW KNOWN AS CARLSON PSI) FOLLOWING COMPLETION OF RESTORATION.

0 80' 160'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12C, TRACER NO. B0071024/0000/00035/REACH5D/71024G15.DWG, DATED 3/27/09. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

MACK ROAD MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE 12-6

Reach 5D Mack Road Staging Area- Transect 1 (Start)- North

Reach 5D Mack Road Staging Area - Transect 1 (End)- North

Reach 5DMack Road Staging Area - Transect 1 (Start)- East

Reach 5D Mack Road Staging Area - Transect 1 (End)- East

Reach 5DMack Road Staging Area - Transect 1 (Start)- South

Reach 5D Mack Road Staging Area - Transect 1 (End)- South

Reach 5DMack Road Staging Area - Transect 1 (Start)- West

Reach 5D Mack Road Staging Area - Transect 1 (End)- West

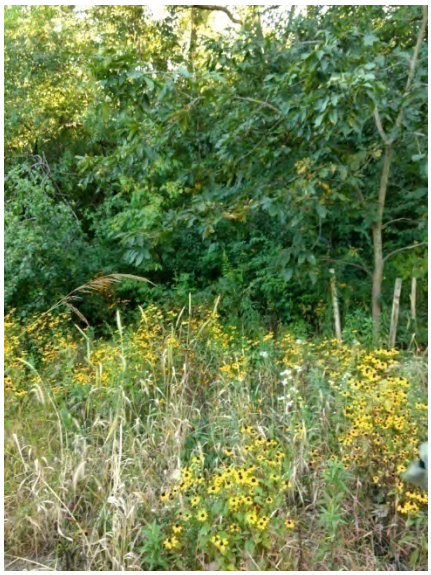
Reach 5DMack Road Upland Savanna - Transect 2 (Start)- North

Reach 5DMack Road Upland Savanna - Transect 2 (Start)- South

Reach 5D Mack Road Upland Savanna - Transect 2 (Start)- East

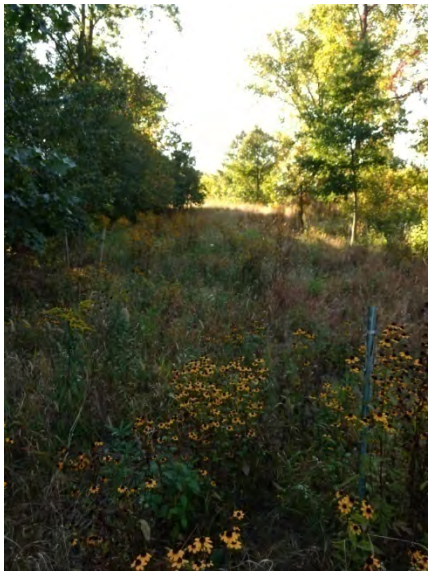
Reach 5D Mack Road Upland Savanna - Transect 2 (Start)- West

Reach 5D Mack Road Upland Savanna - Transect 2 (End)- North

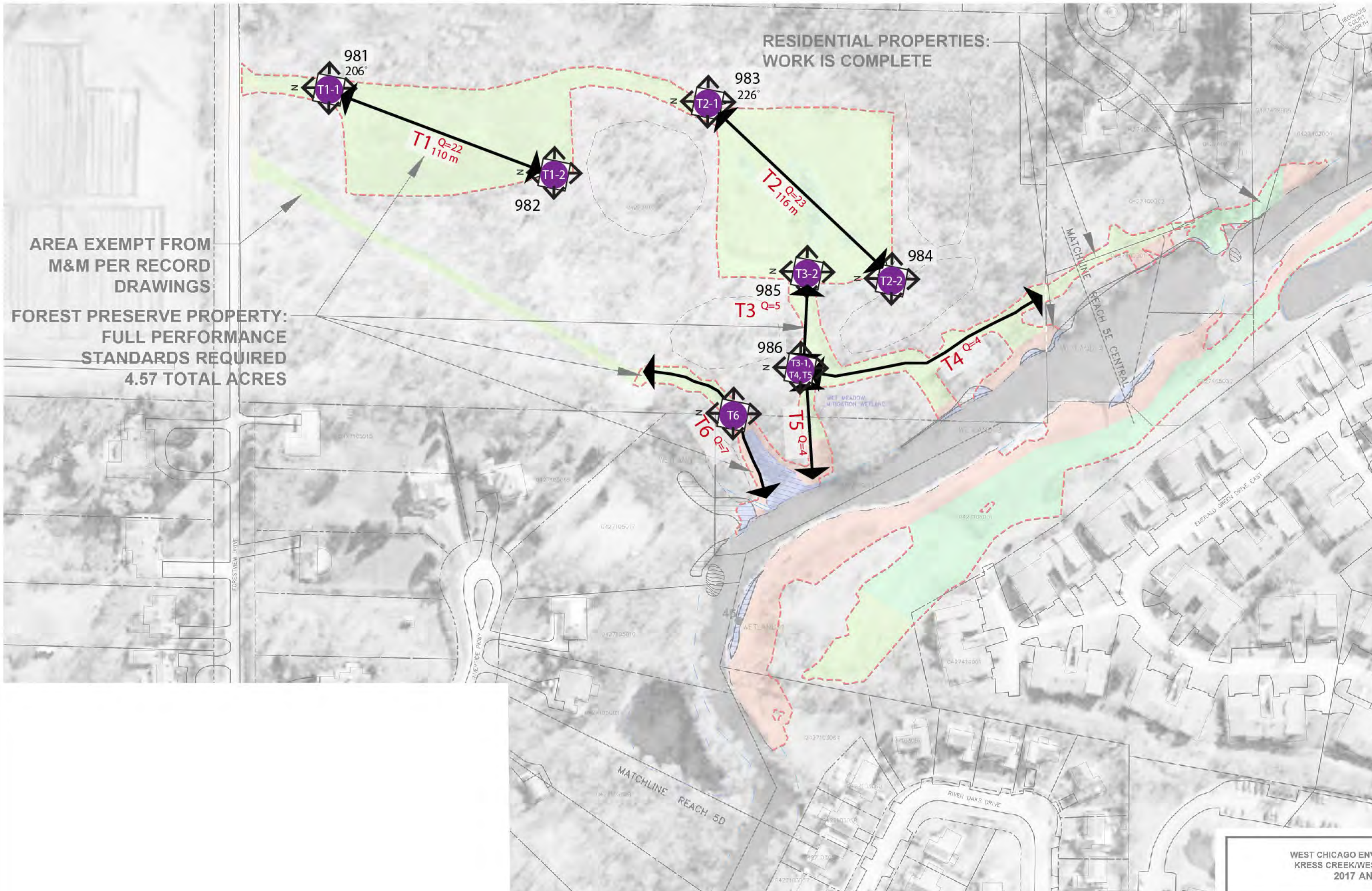


Reach 5D Mack Road Upland Savanna - Transect 2 (End)- South

Reach 5D Mack Road Upland Savanna - Transect 2 (End)- East



Reach 5D Mack Road Upland Savanna - Transect 2 (End)- West



LEGEND:

LIMIT OF ACTUAL DISTURBANCE
PROPERTY LINE
0427201019 RESIDENTIAL PROPERTY REFERENCE NUMBER
ARCHEOLOGICAL SITE
WETLAND BOUNDARY
WET MEADOW WETLAND
MITIGATION WETLAND
RESTORED UPLAND SAVANNA
RESTORED WETLAND
RESTORED SHADY FLOODPLAIN
RESTORED LAWN
RESTORED SAVANNA AND OPEN FLOODPLAIN
EDGE OF WATER
POOL

SURVEY POINT
TRANSECT
Q QUADRAT
TRANSECT PHOTOGRAPHS
1 START
2 END

NOTE:
1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE WERE DEVELOPED BY BLASLAND, BOUCK & LEE FROM SURVEY DATA PROVIDED BY PROSOURCE TECHNOLOGIES, INC. (NOW KNOWN AS CARLSON PSI), DUPAGE COUNTY, AND TRONOX.

0 80' 160'
GRAPHIC SCALE

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS WHICH REFERENCES RECORD DRAWING B-12A, TRACER NO. B0071030/0000/00026/DWG/71030G10.DWG, DATED 5/21/09 CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 5E MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
12-1


Reach 5E- Transect 1 (Start)- North


Reach 5E- Transect 1 (End)- East


Reach 5E- Transect 2 (Start)- South

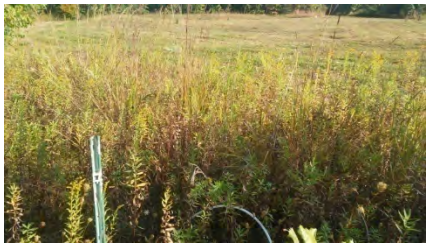

Reach 5E- Transect 1 (Start)- East


Reach 5E- Transect 1 (End)- South


Reach 5E- Transect 2 (Start)- West


Reach 5E- Transect 1 (Start)- South


Reach 5E- Transect 1 (End)- West


Reach 5E- Transect 2 (End)- North


Reach 5E- Transect 1 (Start)- West


Reach 5E- Transect 2 (Start)- North


Reach 5E- Transect 2 (End)- East


Reach 5E- Transect 1 (End)- North


Reach 5E- Transect 2 (Start)- East


Reach 5E- Transect 2 (End)- South


Reach 5E- Transect 2 (End)- West

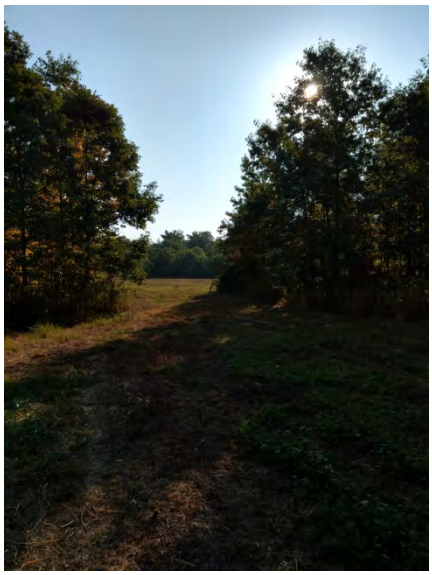

Reach 5E- Transect 3 (End)- East


Reach 5E- Transect 3 (End)- North


Reach 5E- Transect 3 (End)- South


Reach 5E- Transect 3 (End)- West


Reach 5E- Transect 3 (Start)- North


Reach 5E- Transect 3 (Start)- East


Reach 5E- Transect 3 (Start), Transect 4- South


Reach 5E- Transect 3 (Start), Transect 5- West

Reach 5E- Transect 6- North

Reach 5E- Transect 6- South

Reach 5E- Transect 6- East

Reach 5E- Transect 6- West

AREA 10: NO M&M REQUIRED (9/27/13)

AREA 11: FULL PERFORMANCE STANDARDS REQUIRED, 2.86 ACRES
BANK STABILITY MONITORING REQUIRED, 680 LF

AREA 9:
NO M&M REQUIRED (9/27/13),
BANK STABILITY MONITORING
REQUIRED, 600 LF

T1-1
T1-2
T2-1
T2-2
944
943
942
T2 Q=5 22 m
T1 Q=11 214 m
N
MATCHLINE DRAWING B-11G
MATCHLINE DRAWING B-11I
RAYMOND DRIVE
GRAVEL PARKING LOT

FERRY CREEK: BANK STABILITY
MONITORING REQUIRED
TO CONFLUENCE WITH RIVER
BOTH BANKS, 1500 LF TOTAL

AREA 12: FULL PERFORMANCE STANDARDS
REQUIRED (EXCLUDES GRAVEL LOT)
8.98 ACRES (TOTAL)

LEGEND:
- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT
- TRANSECT PHOTOGRAPHS
- 1 START
- 2 END

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11H


Reach 8b Area 11- Transect 1(Start)- North


Reach 8b Area 11- Transect 1(Start)- West


Reach 8b Area 11- Transect 1(End)- South


Reach 8b Area 11- Transect 1(Start)- East


Reach 8b Area 11- Transect 1(End)- North


Reach 8b Area 11- Transect 1(End)- West


Reach 8b Area 11- Transect 1(Start)- South


Reach 8b Area 11- Transect 1(End)- East


Reach 8b Area 11- Transect 2(Start)- North


Reach 8b Area 11- Transect 2(Start)- West


Reach 8b Area 11- Transect 2(End)- South

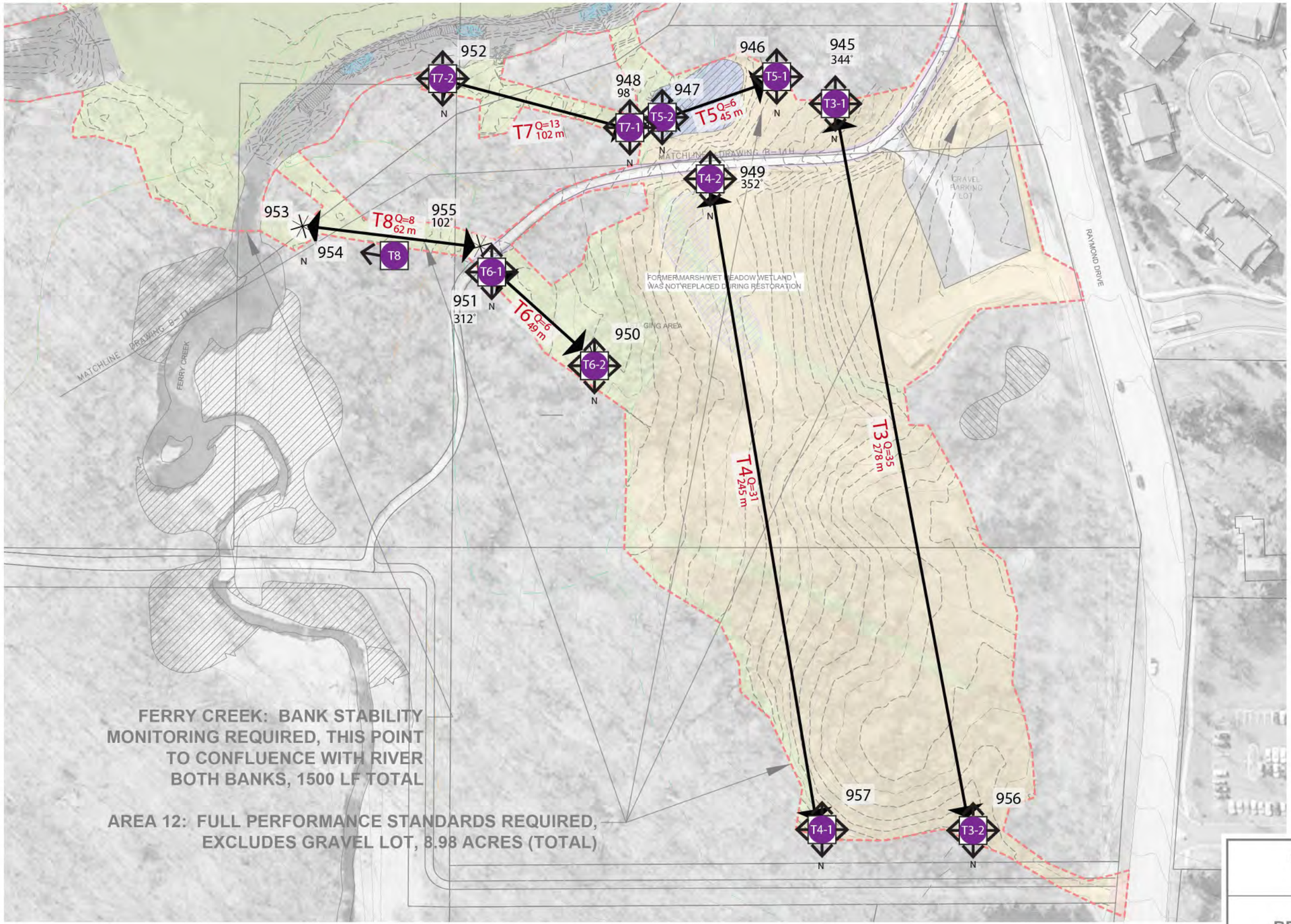

Reach 8b Area 11- Transect 2(Start)- East


Reach 8b Area 11- Transect 2(End)- North


Reach 8b Area 11- Transect 2(End)- West


Reach 8b Area 11- Transect 2(Start)- South


Reach 8b Area 11- Transect 2(End)- East



LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT
- TRANSECT PHOTOGRAPHS
- 1 START
- 2 END

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11I

Reach 8b Area 12- Transect 3 (Start)- North

Reach 8b Area 12- Transect 3 (End)- North

Reach 8b Area 12- Transect 3 (Start)- East

Reach 8b Area 12- Transect 3 (End)- East

Reach 8b Area 12- Transect 3 (Start)- South

Reach 8b Area 12- Transect 3 (End)-South

Reach 8b Area 12- Transect 3 (Start)- West

Reach 8b Area 12- Transect 3 (End)- West

Reach 8b Area 12- Transect 4 (Start)- North

Reach 8b Area 12- Transect 4 (End)- North

Reach 8b Area 12- Transect 4 (Start)- East

Reach 8b Area 12- Transect 4 (End)- East

Reach 8b Area 12- Transect 4 (Start)- South

Reach 8b Area 12- Transect 4 (End)- South

Reach 8b Area 12- Transect 4 (Start)- West

Reach 8b Area 12- Transect 4 (End)- West

Reach 8b Area 12- Transect 5 (Start)- North

Reach 8b Area 12- Transect 5 (Start)- South

Reach 8b Area 12- Transect 5 (Start)- East

Reach 8b Area 12- Transect 5 (Start)- (West)

Reach 8b Area 12- Transect 5 (End)- North

Reach 8b Area 12- Transect 5 (End)- South

Reach 8b Area 12- Transect 5 (End)- East

Reach 8b Area 12- Transect 5 (End)- West

Reach 8b Area 12- Transect 6 (Start)- North

Reach 8b Area 12- Transect 6 (Start)- South

Reach 8b Area 12- Transect 6 (Start)- East

Reach 8b Area 12- Transect 6 (Start)- West

Reach 8b Area 12- Transect 6 (End)- North

Reach 8b Area 12- Transect 6 (End)- South

Reach 8b Area 12- Transect 6 (End)- East

Reach 8b Area 12- Transect 6 (End)- West

Reach 8b Area 12- Transect 7 (Start)- North

Reach 8b Area 12- Transect 7 (Start)- South

Reach 8b Area 12- Transect 7 (End)- North

Reach 8b Area 12- Transect 7 (Start)- East

Reach 8b Area 12- Transect 7 (Start)- West

Reach 8b Area 12- Transect 7 (End)- East

Reach 8b Area 12- Transect 7 (End)- South

Reach 8b Area 12- Transect 7 (End)- West

Reach 8b Area 12- Transect 8 (no quadrats)

POD R8-3: FULL PERFORMANCE STANDARDS
REQUIRED (MAY 2014 PROGRESS RPT)
0.14 TOTAL ACRES

POD R8-40: RESIDENTIAL LOTS COMPLETE
(MAY 2014 PROGRESS RPT)

POD R8-40:
PARCEL 04-35-404-013
RELEASED 08-11-2015

POD R8-4: RESIDENTIAL LOTS COMPLETE
(MAY 2014 PROGRESS RPT)

T10-1 961 T10Q=1

T10-2 960 T10Q=2

MATCHLINE REACH 7

MATCHLINE DRAWING B-11B

BATAVIA ROAD

PERMANENT STONE PARKING LOT

MAIN STREET

WARRENVILLE ROAD

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH LAWN SEED PER TABLE 7 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TO FRONT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH PRAIRIE DROPSEED
- SURVEY POINT
- TRANSECT
- Q QUADRAT
- TRANSECT PHOTOGRAPHS
- 1 START
- 2 END

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS.
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11A


Reach 8a Pod 8-3- Transect 10 (Start)- North


Reach 8a Pod 8-3- Transect 10 (Start)- West


Reach 8a Pod 8-3- Transect 10 (End)- South


Reach 8a Pod 8-3- Transect 10 (Start)- East


Reach 8a Pod 8-3- Transect 10 (End)-North


Reach 8a Pod 8-3- Transect 10 (End)- West


Reach 8a Pod 8-3- Transect 10 (Start)- South


Reach 8a Pod 8-3- Transect 10 (End)- East

AREA 4: FULL PERFORMANCE STANDARDS REQUIRED, 0.35 ACRES
BANK STABILITY MONITORING REQUIRED, 450 LF

AREA 5: FULL PERFORMANCE
STANDARDS REQUIRED, 0.28 ACRES
BANK STABILITY MONITORING REQUIRED, 700 LF

AREA 3: NO M&M REQUIRED (9/27/13)
WEST BANK RELEASED FROM
BANK STABILITY MONITORING
(8/11/15)

974 975 976 977 978

T11 T12-2 T12-1 T13-1 T13-2

T11 Q=1

T12 Q=7 67 m

T13 Q=6 60 m

RIVER ROAD

TOWNLINE ROAD

FOREST VIEW AVE. S.

MATCHLINE DRAWING B-11B

MATCHLINE DRAWING B-11D

LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE A ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE B ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE B ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT
- TRANSECT PHOTOGRAPHS
- 1 START
- 2 END

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS
CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11C


Reach 8a Area 4- Transect 11- North


Reach 8a Area 5- Transect 12 (Start)- North


Reach 8a Area 5- Transect 12 (End)- North


Reach 8a Area 4- Transect 11- East


Reach 8a Area 4- Transect 12 (Start)- East


Reach 8a Area 5- Transect 12 (End)- East


Reach 8a Area 4- Transect 11- South


Reach 8a Area 4- Transect 12 (Start)- South


Reach 8a Area 4- Transect 12 (End)- South


Reach 8a Area 5- Transect 11- West


Reach 8a Area 4- Transect 12 (Start)- West


Reach 8a Area 4- Transect 12 (End)- West


Reach 8a Area 5- - Transect 13 (Start)- North


Reach 8a Area 5- Transect 13 (Start)- West


Reach 8a Area 5- Transect 13 (End)- South


Reach 8a Area 5- Transect 13 (Start)- East


Reach 8a Area 5- Transect 13 (End)- North


Reach 8a Area 5- Transect 13 (End)- West


Reach 8a Area 5- Transect 13 (Start)- South


Reach 8a Area 5- Transect 13 (End)- East

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE B-11D


Reach 8a Area 6- Transect 14 (Start)- North


Reach 8a Area 6- Transect 14 (End)- North


Reach 8a Area 6- Transect 15- North


Reach 8a Area 6- Transect 14 (Start)- East


Reach 8a Area 6- Transect 14 (End)- East


Reach 8a Area 6- Transect 15- East


Reach 8a Area 6- Transect 14 (Start)- South

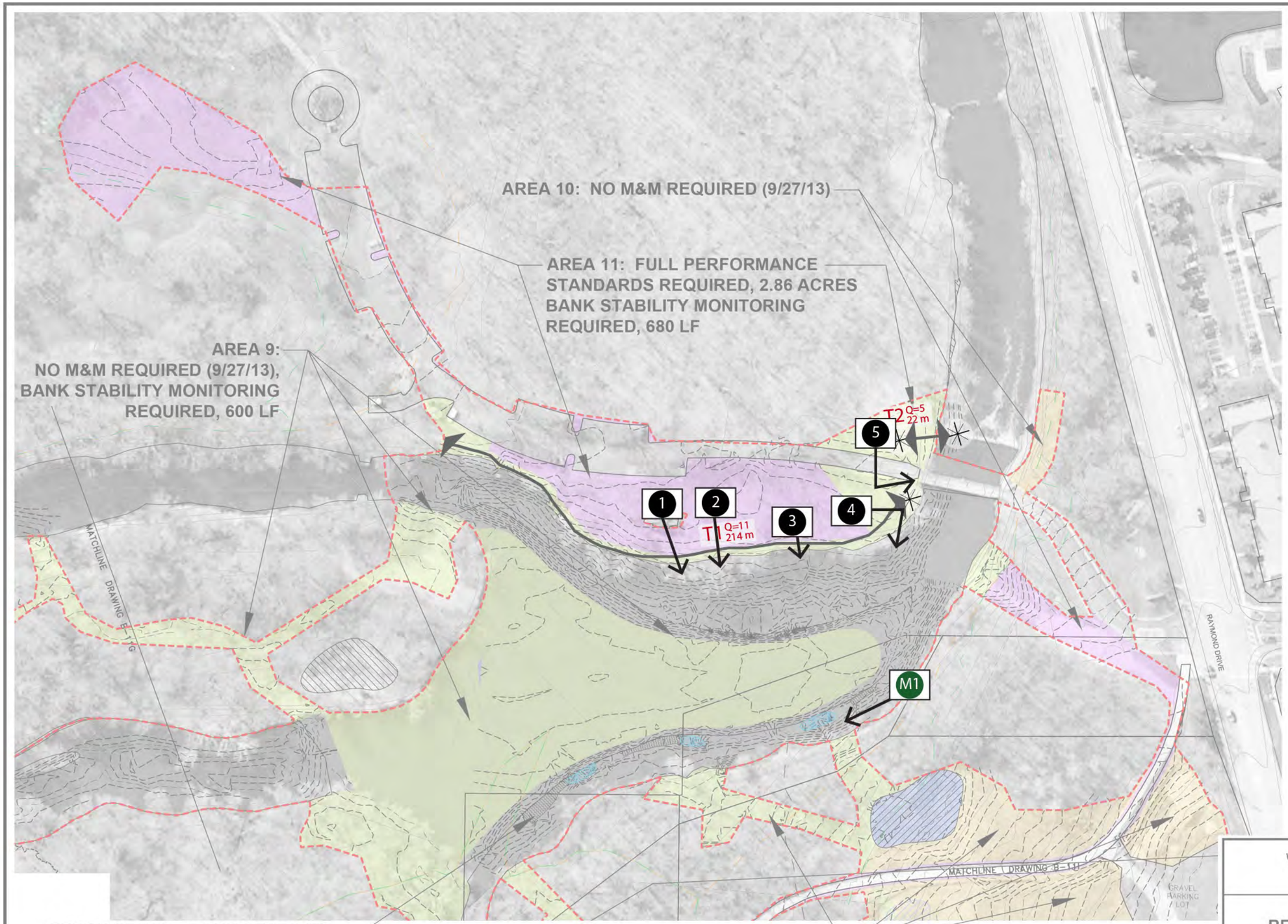

Reach 8a Area 6- Transect 14 (End)- South


Reach 8a Area 6- Transect 15- South


Reach 8a Area 6- Transect 14 (Start)- West


Reach 8a Area 6- Transect 14 (End)- West


Reach 8a Area 6- Transect 15- West



LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12
- AREA SEEDED WITH TRI-BLEND PERENNIAL RYE SEED PER TABLE 11 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT
- BANK STABILITY PHOTOGRAPH LOCATION, 12/05/2017
- BANK STABILITY PHOTOGRAPH LOCATION, 8/22/2017

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

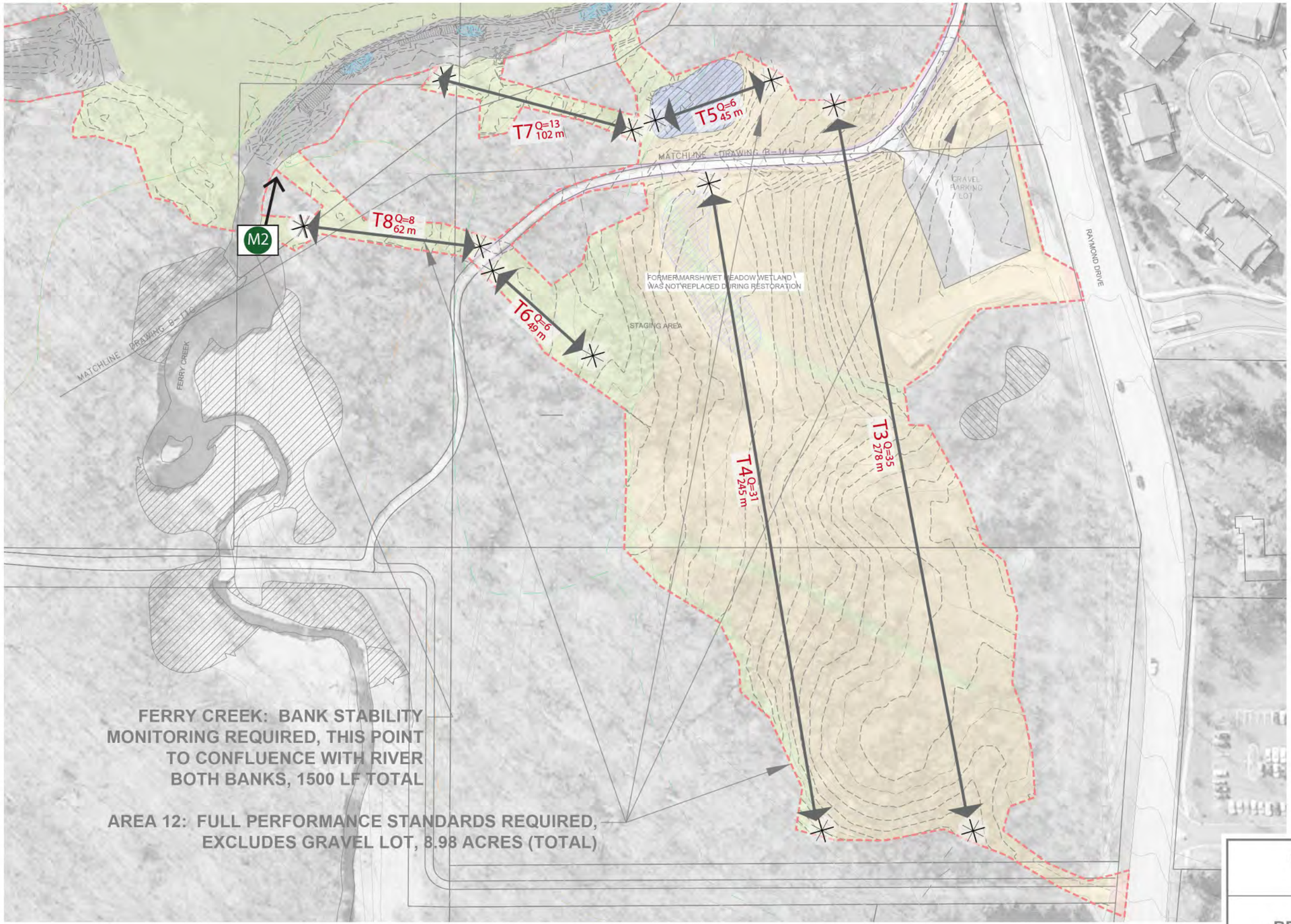
FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUP JJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE B-11H



LEGEND:

- APPROXIMATE EDGE OF WATER
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR
- LIMIT OF ACTUAL DISTURBANCE
- EXISTING TRAIL USED AS HAUL ROAD
- WETLAND BOUNDARY
- MARSH/WET MEADOW WETLAND
- FORESTED WETLAND
- BERM
- AREA SEEDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-12
- AREA SEEDED WITH WETLAND SEED MIX PER TABLE 6 ON DRAWING B-12
- AREA SEEDED WITH IDOT CLASS 2A SALT TOLERANT ROADSIDE MIX PER TABLE 8 ON DRAWING B-12
- AREA SEEDED WITH UPLAND PRAIRIE SEED MIX PER TABLE 5 ON DRAWING B-12

NOTES:

1. BASEMAP PROVIDED BY DuPAGE COUNTY ON FEBRUARY 5, 2008. TOPOGRAPHY WITHIN THE LIMIT OF SURVEY CREATED FROM SURVEY COLLECTED BY CARLSON PSI FROM NOVEMBER 2010 THROUGH JANUARY 2011, AND CARLSON McCAIN FROM OCTOBER 2011 THROUGH OCTOBER 2012.
2. IN ADDITION TO THE SPECIFIED SEED MIX, RESTORED BANKS WERE OVERSEEDED WITH A 50:50 BLEND OF PRAIRIE CORDGRASS AND DARK GREEN BULRUSH FROM THE EDGE OF WATER TO THE TOP OF THE BANK TO A MAXIMUM DISTANCE OF 15-FT. FROM THE EDGE OF WATER.

- SURVEY POINT
- TRANSECT
- Q QUADRAT
- BANK STABILITY PHOTOGRAPH LOCATION, 8/22/2017

0 60' 120'
GRAPHIC SCALE

MAP UPDATED 8-17-2015

FIGURE MADE FROM 2013 ANNUAL MONITORING REPORT FILE CREATED BY ARCADIS. CURRENT AERIAL PHOTO FROM BING MAPS, JULY 2015.

WEST CHICAGO ENVIRONMENTAL RESPONSE TRUST
KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
2017 ANNUAL MONITORING

REACH 8 MONITORING STATUS

SMITHGROUPJJR
44 EAST MIFFLIN STREET
SUITE 500
MADISON, WI 53703
608.251.1177
www.smithgroupjjr.com

FIGURE
B-11I

Reach 8B- Photo 1

Reach 8B- Photo 2

Reach 8B- Photo 3

Reach 8B- Photo 4

Reach 8B- Photo 5

2017 Annual Monitoring Report

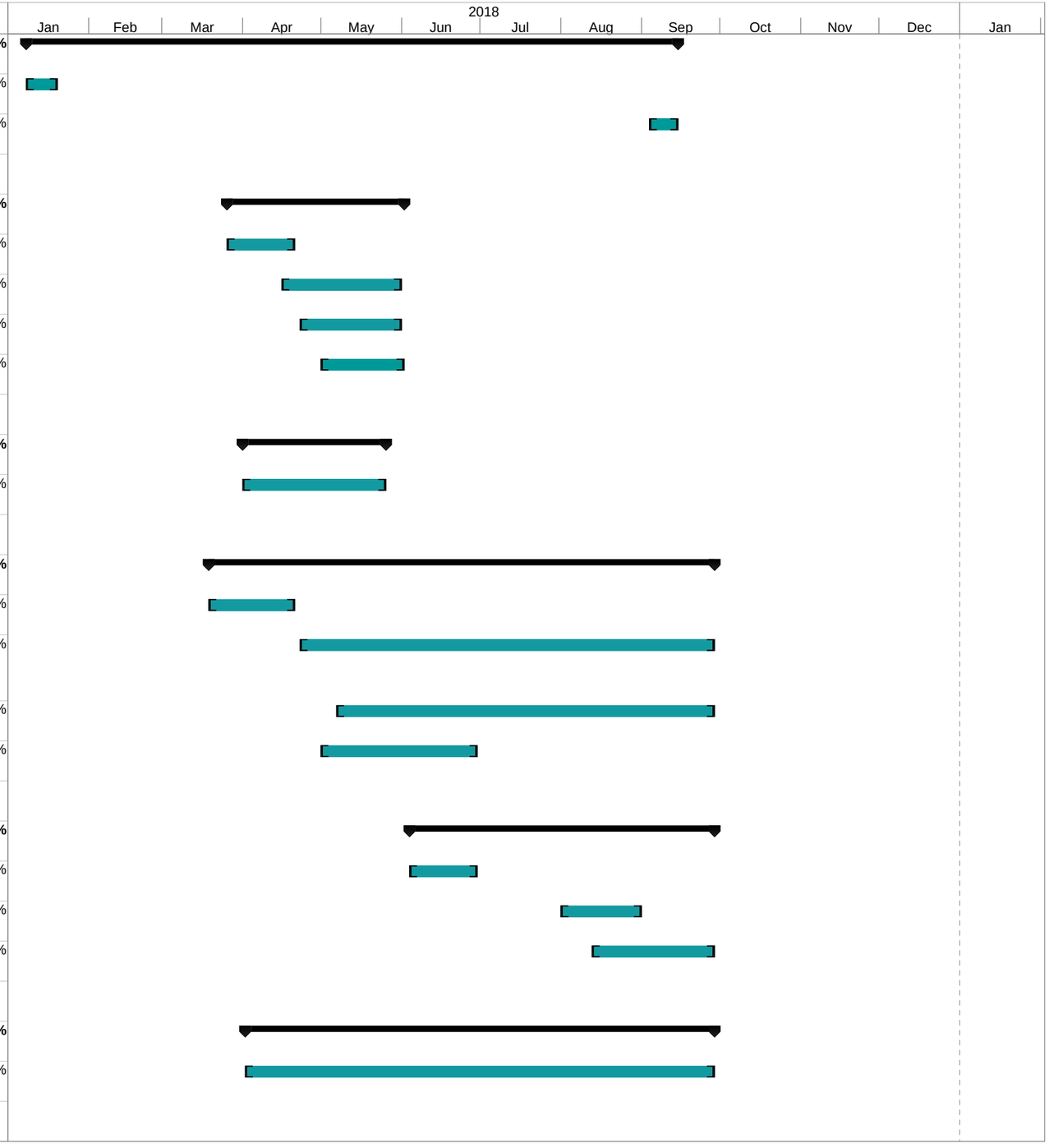
Reaches 5D, 5E, 7, 8, and the Mack Road Staging Area of the Kress Creek / West Branch DuPage River Site

Appendix E

2018 Project Schedule

WCERT Kress Creek Monitoring
2018 Projected Schedule

ID	Task Name	Duration	Start	Finish	% Complete
1	**Meetings**	**180 days**	**Mon 1/8/18**	**Fri 9/14/18**	**0%**
2	Meeting with Agencies to Review 2018 Recommendations	10 days	Mon 1/8/18	Fri 1/19/18	0%
3	Meeting with Local Communities to Review Woody Plant Replacement	9 days	Tue 9/4/18	Fri 9/14/18	0%
4					
5	**Implementation of Remedial Planting and Seeding**	**50 days**	**Mon 3/26/18**	**Fri 6/1/18**	**0%**
6	Disc and Broadcast Herbicide Reach 5E	4 wks	Mon 3/26/18	Fri 4/20/18	0%
7	Re-Seed Portions of Reach 8 Areas 5, 6, 11, and 12.	6.8 wks	Mon 4/16/18	Thu 5/31/18	0%
8	Re-Seed of Reach 5E	29 days	Mon 4/23/18	Thu 5/31/18	0%
9	Install Live Plant Plugs in Reach 5D and Reach 8, Area 11	24 days	Tue 5/1/18	Fri 6/1/18	0%
10					
11	**Implementation of Tree and Shrub Management**	**40 days**	**Sun 4/1/18**	**Fri 5/25/18**	**0%**
12	Reset Stakes at Mack Rd. and Reach 8B.	8.2 wks	Sun 4/1/18	Fri 5/25/18	0%
13					
14	**Implementation of Vegetation Management Activities**	**140 days**	**Mon 3/19/18**	**Fri 9/28/18**	**0%**
15	Controlled Burn of Reach 8 Areas 11 & 12	25 days	Mon 3/19/18	Fri 4/20/18	0%
16	Spot Herbicide of Reach 8 Pod R8-3, Areas 4, 5, 6, 11, 12 and Reach 5D & 5E (As Needed)	115 days	Mon 4/23/18	Fri 9/28/18	0%
17	Mowings of Reach 8 Areas 4,11, 12 and Reach 5D & 5E (1-2x)	105 days	Mon 5/7/18	Fri 9/28/18	0%
18	Cut and Herbicide Woody Weeds of Reach 8 Pod R8-3 & Area 6	44 days	Tue 5/1/18	Fri 6/29/18	0%
19					
20	**Vegetation Monitoring**	**85 days**	**Mon 6/4/18**	**Fri 9/28/18**	**0%**
21	Inventory Flora, Early Summer 2018	20 days	Mon 6/4/18	Fri 6/29/18	0%
22	Inventory and Assess Tree Survival / Replacement Recommendations	23 days	Wed 8/1/18	Fri 8/31/18	0%
23	Inventory and Quantitative Sampling, Late Summer 2018	35 days	Mon 8/13/18	Fri 9/28/18	0%
24					
25	**Bank Stability Monitoring**	**130 days**	**Mon 4/2/18**	**Fri 9/28/18**	**0%**
26	Bank Stability Monitoring	130 days	Mon 4/2/18	Fri 9/28/18	0%
27					



WCERT Kress Creek Monitoring
2018 Projected Schedule

ID	Task Name	Duration	Start	Finish	% Complete
28	**Reporting**	**89 days**	**Mon 10/1/18**	**Thu 1/31/19**	**0%**
29	Prepare Draft Annual Report	11.6 wks	Mon 10/1/18	Wed 12/19/18	0%
30	Review of Draft Report by WCERT	2.4 wks	Thu 12/20/18	Fri 1/4/19	0%
31	Finalize Report for Distribution to Agencies	5 days	Mon 1/7/19	Fri 1/11/19	0%
32	Distribute Report to Agencies	1 day	Mon 1/14/19	Mon 1/14/19	0%
33	Agency Report Review	9 days	Tue 1/15/19	Fri 1/25/19	0%
34	Finalize Report with Agency Comments	4 days	Mon 1/28/19	Thu 1/31/19	0%